SIR GEORGE WILLIAMS UNIVERSITY

ANNOUNCEMENT

DAY AND EVENING DIVISIONS

1962-63

FACULTIES OF ARTS, SCIENCE, AND COMMERCE

Sir George Williams University

OF THE

YOUNG MEN'S CHRISTIAN ASSOCIATION OF MONTREAL

THE FACULTIES OF

ARTS, SCIENCE, and COMMERCE

ACADEMIC YEAR 1962-63

INDEX

The alphabetical index at the back of this announcement will aid you in finding quickly the information in which you are particularly interested.

1435 Drummond Street, Montreal, Canada

TABLE OF CONTENTS

CALENDAR

Academic Year 1962-63

1962

TUESDAY, MAY 22.	Summer term begins in Evening Division.
MONDAY, JULY 2.	Dominion Day (No lectures).
THURSDAY, JULY 26.	Last day for receiving applications to write supplemental examinations.
WEDNESDAY, AUGUST 15.	Last day for receiving Engineering applications.
MONDAY, AUGUST 20.	Summer term final examinations begin.
MONDAY, AUGUST 27.	Registration, see Schedule — Page 9.
MONDAY, SEPTEMBER 3.	Labour Day — University closed.
MONDAY, SEPTEMBER 10.	Supplemental examinations begin.
THURSDAY, SEPTEMBER 20.	Registration closes. *Note:* Registration may close earlier if maximum is reached before this date. There is no late registration.
MONDAY, SEPTEMBER 24.	First term begins in Day and Evening Divisions.
MONDAY, OCTOBER 8.	Thanksgiving Day — No lectures in the Day Division.
THURSDAY, OCTOBER 11.	Founders Day.
SUNDAY, NOVEMBER 11.	Remembrance Day.
SATURDAY, DECEMBER 22.	Last day of classes before Christmas vacation, Day and Evening Divisions.

CALENDAR

Academic Year 1962-63

1963

MONDAY, JANUARY 7.	First term examinations begin in Day and Evening Divisions.
MONDAY, JANUARY 21.	Second term begins in both divisions.
FRIDAY, APRIL 12.	Good Friday. (No lectures.)
SUNDAY, APRIL 14.	Easter.
MONDAY, APRIL 15.	Easter Monday—No lectures in the Day Division.
FRIDAY, APRIL 19.	Last day of classes in the Day Division.
SATURDAY, APRIL 20.	Last day of classes in the Evening Division.
MONDAY, APRIL 22.	Final examinations begin in the Day and Evening Divisions.
MONDAY, MAY 6.	Registration begins for Summer Session.
TUESDAY, MAY 21.	Summer term begins in Evening Division.
FRIDAY, MAY 31.	Convocation.

Registration and Registration Dates

REGISTRATION AND REGISTRATION DATES

Before any new student may enter the classes of the university, he must do two things — apply for admission (see p. 58), and if formally notified that he has been accepted, come in to register on the date indicated in the schedule of "Registration Dates" immediately below. A clear distinction should be made between these two steps. "APPLICATION" is the submission of a request for admission, written on the proper application form (to be found at the end of the announcement) and always to be accompanied by official copies of school certificates or other proof of qualifications for admission. "REGISTRATION" is a second step, when those students accepted come down to discuss their program for the coming session, formally enroll in specific courses, obtain cards admitting them to those courses, and make proper arrangements with the Bursar's office for the payment of their fees. *Note*, that except in the cases of evening students enrolling as "partial students," *no student will be registered who has not been accepted by the University before the registration period begins.*

FORMER STUDENTS need not apply for admission unless they are changing faculties, transferring from "partial student" to undergraduate, or from the evening division to the day division. Otherwise, if they are in good academic standing, they need only appear on the proper day for registration to select their courses and pay their fees.

FALL REGISTRATION DATES

All "Registration" for the fall term 1962-63 will take place according to the following schedule. (To be sure of consideration, all new students should submit their applications with their school certificates and grades as early as possible. As the University has reached its maximum enrollment, the Registrar's office will cease to consider applications as soon as it has accepted all that there will be room for in the coming year. Certainly, no application is likely to be considered after August 24th — except for partial courses in the evening). As the University is operating at maximum capacity, students who do not register on the date assigned for them may be unable to enter classes this year. Former students should note that absolutely no registration will be made after September 20th.

Registration will take place daily from 10:00 a.m. until 8:00 p.m. (Saturdays 10:00 a.m. until 12:00 noon — unless otherwise noted) according to the following schedule. Approximately 500 students will be registered daily. Starting at 5:00 p.m. on the day before the first date assigned for each group, after August 27th, appointment cards will be given out to students at the registration centre. Each

card will specify a date and time at which the student must appear for registration. Admission to the registration centre will be permitted only on presentation of a card at the proper time. A limited number of cards will be given out for each day.

SCHEDULE FOR ARTS, SCIENCE, AND COMMERCE

EVENING DIVISION

4th year students —(all Evening students who have 15 or more credits.)
    (a) will pick up appointment cards from 5:00-6:00 p.m. on August 24th, and after 9:00 a.m. August 27th.
    (b) will register August 27-28th.

3rd year students —(all Evening students who have 10 or more credits.)
    (a) will pick up appointment cards from 5:00 p.m. on August 28th.
    (b) will register August 29-30th.

2nd year students—(all Evening students who have 5 or more credits.)
    (a) will pick up appointment cards from 5:00 p.m. on August 30th.
    (b) will register August 31st, Sept. 4th. (University will be closed on Sept. 1st and 3rd.)

Former 1st year students —(all former Evening students who have less than 5 credits.)
    (a) will pick up appointment cards from 5:00 p.m. on Sept. 4th.
    (b) will register Sept. 5-6th.

New 1st year students —(new Evening students entering the *University* for the first time.)
    (a) appointment cards will be mailed to all new first year students. Those who have not received cards will pick them up from 5:00 p.m. Sept. 6th.
    (b) will register Sept. 7-8th (until 12:00 Noon only on Sept. 8th.)

New Partial students —new Partial students (Evening Division only) will apply for admission and register at the same time. Former partial students will register with undergraduate evening students according to the above schedule according to the number of credits they have on record. New Partial students should note that there will only be a limited number of places available and that places will be awarded in order of appearance at registration.

    (a) appointment cards will be given out at 5:00 p.m. on Sept. 18th.

    (b) will register on Sept. 19-20th.

DAY DIVISION

4th year students —(all Day students who have 15 or more credits.)

    (a) will pick up appointment cards from 5:00 p.m. on Sept. 7th.

    (b) will register Sept. 10th.

3rd year students —(all Day students who have 10 or more credits.)

    (a) will pick up appointment cards from 5:00 p.m. on Sept. 10th.

    (b) will register Sept. 11th.

2nd year students—(all Day students who have 5 or more credits.)

    (a) will pick up appointment cards from 5:00 p.m. on Sept. 11th.

    (b) will register Sept. 12-13th.

1st year students Science —(including first year Engineering students.)

    (a) appointment cards will be mailed to all new first year students.)

Former first year Science students who have less than 5 credits will pick up appointment cards from 5:00 p.m. Sept. 13th.

    (b) will register Sept. 14th.

1st year students Arts —(a) appointment cards will be mailed to all new first year students.

Former first year Arts students who have less than 5 credits will pick up appointment cards from 5:00 p.m. Sept. 14th.

    (b) will register Sept. 15th (until 12:00 Noon) and Sept. 17th.

1st year students Commerce —(a) appointment cards will be mailed to all new first year students.

Former first year Commerce students who have less than 5 credits will pick up appointment cards from 5:00 p.m. Sept. 17th.

    (b) will register Sept. 18th.

Note:—All Day Freshmen must participate in the Psychological Testing Program. See page 40.

Note:—Students whose applications have not been received before August 24th will not be interviewed, nor will their applications be considered between August 27th and September 18th. From September 19th to September 20th the University will consider late applications if presented in person and accompanied by certificates of former schooling—*as long as there are openings for further registration.* When the maximum registration is reached, regardless of the date, registration will be closed and no further applications will be considered.

Registration of former students will continue up to and including September 20th. Students who have not re-registered by that date will have to wait a year before re-entering classes. *Note:*—"Former Student" means a student previously registered and attending classes in the University. Students who have previously attended classes in any of the "Sir George Williams Schools" will be classified as "new students" in so far as the University is concerned.

SCHEDULE FOR ENGINEERING REGISTRATION

1st year Engineering students—will register with first year Science students—Day or Evening—in accordance with the Schedule given above.

2nd and 3rd year Engineering students—new students will register with Evening students, regardless of whether they are entering the Day or Evening Division from August 27-30th, and should pick up an appointment card for registration on the preceding evening. Former Engineering students may register at any time between August 27 - September 20th by picking up an appointment card for the chosen day of registration.

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Lecturer in Commerce

Grace Aronoff, B.A. (McGill),
    Lecturer in English
Leonard Arnold, B.A. (S.G.W.),
    Lecturer in English
Alfred D. G. Arthurs, B.Ped. (Toronto), M.A. (Acadia),
    Lecturer in Social Science
William L. Atkinson, B.A. (Bishop's), M.B.A. (U.W.O.),
    Lecturer in Commerce
Mirza Y. Baig, B.A. (Muslin, India), M.A. (Boston), Ph.D. (McGill),
    Lecturer in Political Science
Orval Graham Barker, M.C.I.,
    Lecturer in Commerce
Rosalynd Baylin, M.A. (McGill),
    Lecturer in English
Clarence Bayne, M.A. (U.B.C.),
    Lecturer in Economics
Jean Billard,
    Lecturer in French
Richard Billmeier,
    Lecturer in Fine Arts
William Campbell Bishop, B.Sc. (St. Francis Xavier) B.Eng. (Nova Scotia), Dipl. B.A. (Western),
    Lecturer in Commerce
Cynthia Bled, M.A. (Howard), B.L.S. (McGill),
    Lecturer in Economics
Mary Alberta Boswall, B.Sc. (Dal.),
    Lecturer in Mathematics
Carl Johan Breida, B.C.L. (Oslo),
    Lecturer in Commerce
Ruth Briggs, B.A. (Sask.),
    Lecturer in English
Mildred Brocklehurst, B.A. (McGill),
    Lecturer in English
Douglas Watson Burns, B.Sc. (Bishops),
    Lecturer in Commerce
Herbert Conrad Byleveld, M.Ec. (Rotterdam),
    Lecturer in Commerce
Peter C. Cameron, B.Sc. (Glasgow),
    Lecturer in Natural Science
Arthur Candib, B.A. (S.G.W.),
    Lecturer in English
Hector Waterman Chandler, B.Sc. (Com.) (S.G.W.), M.C.I.,
    Lecturer in Commerce
Georges E. Charlez, B.A., LL.B. (Lille, France),
    Lecturer in French

Leslie Gordon Clarkson, B.Com. (S.G.W.), C.G.A.,
    Lecturer in Accountancy
Robert E. Cloutier, B.Com. (S.G.W.), C.A.,
    Lecturer in Accountancy
E. George Cochrane, B.A. (S.G.W.), M.Ed. (Toronto),
    Lecturer in English
Miklos Csorgo, B.A. (Budapest),
    Lecturer in Mathematics
Gordon James Cunningham,
    Lecturer in Commerce
William Henry Davies, B.Com. (S.G.W.),
    Lecturer in Commerce
Ernest W. V. Deathe, B.A. (Dal.),
    Lecturer in Mathematics
James Gardiner Dick, B.Sc. (S.G.W.),
    Lecturer in Chemistry
Joseph Dickstein, B.Com. (McGill), M.B.A. (Penn.),
    Lecturer in Commerce
Hedley Gardiner Dimock, B.A. (Beloit), M.A., Ed.D. (Col.),
    Lecturer in Sociology
Robert Alexander Dingwall, B.Sc. (Alta.), M.Sc. (Illinois),
    Lecturer in Mathematics
Donald E. Dunn, C.A.,
    Lecturer in Accountancy
Josephine Dunn, B.A. (London),
    Lecturer in English
Maria Egger, Ph.D. (London),
    Lecturer in English
Kenneth Charles Etheridge, B.A. (S.G.W.),
    Lecturer in English
Richard Henry Fallon, B.Com. (McGill), C.A.,
    Lecturer in Accountancy
Edmund Fancott,
    Lecturer in English
John Flood,
    Lecturer in English
Timothy Pearce Foley
    Lecturer in Commerce
Maria Anna Fuerstenwald, B.A. (S.G.W.),
    Lecturer in German
Geraldine Fulton, B.Sc., B.A. (Mt. Allison), M.A. (Toronto), M.Sc. (McGill),
    Lecturer in Economics

Herve Fuyet, B.A. (Sorbonne),
Lecturer in French

Maurice Gagnon, B.A. (Laval),
Lecturer in French

Helen Gardner, B.A. (Teachers College, Albany), M.A. (McGill),
Lecturer in English

John Garstang, M.A. (Oxon),
Lecturer in Classics

Zacheria Mathew George, M.Sc. (St. John College, India), Ph.D. (McGill),
Lecturer in Chemistry

Harry Thomas Gill, B.A. (Oxon),
Lecturer in Commerce

Jack Goldner, B.A., B.Com. (S.G.W.), B.S.W. (McGill),
Lecturer in Social Science

William E. Gravelle, M.A., Ph.D. (Toronto).
Lecturer in Physics

Rosa B. Gualtieri, B.A., B.C.L., (McGill),
Lecturer in Commerce

Charles R. Halford, B.Com. (S.G.W.), M.A. (McGill), F.L.M.I.,
Lecturer in Economics

Arthur Keith Ham, B.A. (McGill), M.B.A. (U.W.O.), B.C.L. (McGill),
Lecturer in Commerce

Winston C. Hassam,
Lecturer in Commerce

Lewis Glencross Hearle,
Lecturer in Commerce

Alvin E. Held, B.Sc. (McGill), C.A.,
Lecturer in Commerce

Alvin William Heron,
Lecturer in Commerce

Gordon Arthur Holmes, B.Com., Dip. M.B.A., (McGill), A.C.I.S.,
Lecturer in Commerce

F. Holt Horner, B.Com. (McGill), R.I.A.,
Lecturer in Accountancy

Rabbi Aron Horowitz,
Lecturer in Hebrew

Leslie George Humber, B.Sc., (S.G.W.), Ph.D. (U.N.B.),
Lecturer in Chemistry

William Douglas Innes, B.Com. (S.G.W.), A.C.I.S., C.G.A.,
Lecturer in Commerce

Lucille Irvine, M.A. (McGill),
Lecturer in Psychology

Ove Billescov Jansen, B.Com. (S.G.W.), C.A.,
Lecturer in Accountancy

Jean Maurice Jarry, B.A., L.Sc., L.Pèd. (Montreal), M.Sc. (McGill),
Lecturer in Mathematics

Arlette Joffe, Agregée ès Lettres (Brussels),
Lecturer in French

R. Colin Jonas, B.A. (S.G.W.), B.Sc. (Springfield),
Lecturer in English

George C. Kendall, C.A.,
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Doreen Kimura, M.A., Ph.D. (McGill),
Lecturer in Psychology

Henry King, B.A. (Oxon),
Lecturer in Commerce

Arthur S. Klimes, B.Sc., B.Com. (S.G.W.),
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Victor E. Knight,
Lecturer in English

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Lecturer in Political Science

Silvia Eileen Lamb, B.A. (S.G.W.),
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Barbara Lavender,
Lecturer in Commerce

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Lecturer in English

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Lecturer in Economics

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Jose Lobato,
Lecturer in Spanish

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Lecturer in Mathematics

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Lecturer in French

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Lecturer in English

Edward Brian Markland, C.A., A.C.I.S.,
Lecturer in Commerce

Frederick Ernest Marlow,
Lecturer in Accountancy

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Lecturer in English

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Lecturer in Chemistry

Gerald Ulric Maurice, B.A. (Ottawa), L.Sc.Soc., M.A. (Montreal),
Lecturer in Commerce

Michael Maxwell, B.A. (S.G.W.),
Lecturer in History

Joseph A. McCann,
Lecturer in Commerce

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Lecturer in Accountancy

Audrey Miller, M.A. (Toronto),
Lecturer in English

Malcolm H. Miller, B.A. (McGill),
Lecturer in English

Charles Mitchell, B.A. (McGill),
Lecturer in English

Jean Monet, B.A. (St. Patricks College, Ottawa), LL.L. (Ottawa),
Lecturer in Commerce

John McEvoy Moore,
Lecturer in Commerce

John H. Morgan, B.Sc. (Manitoba), M.Sc., Ph.D. (Wisconsin),
Lecturer in Engineering

Margaret Morris, B.A. (S.G.W.),
Lecturer in English

Paul Gallus Muller, Dipl. Ing. Agr. (Switzerland), M.S.A. (Toronto),
Lecturer in Commerce

George V. Mueller, B.Sc., Ph.D. (McGill),
Lecturer in Commerce

Coleman Joseph Newman, B.A. (S.G.W.),
Lecturer in English

Alberto Navascues, L.L. (Seville),
Lecturer in Spanish

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Lecturer in Mathematics

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Lecturer in Commerce

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Lecturer in English

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Gwendoline Pilkington, B.A. (S.G.W.),
Lecturer in English

Abraham Ram, B.A. (S.G.W.),
Lecturer in English

Lea M. Read, B.A., B.Sc. (S.G.W.),
Lecturer in Commerce

Thomas Clift Read,
Lecturer in Commerce

Stanley Davis Reavely, C.A.,
Lecturer in Accountancy

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  Lecturer in Mathematics
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  Lecturer in Commerce
Sybil Ross, B.A. (S.G.W.), M.S.S.W. (Boston), A.C.S.W.,
  Lecturer in Sociology
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  Lecturer in Political Science
Harry H. Schwartz, B.Eng. (McGill), S.M. (M.I.T.), P.Eng.,
  Lecturer in Mathematics
Ursula Schweiger, Dip.Rer.Pol. (Hamburg),
  Lecturer in Economics
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  Lecturer in Russian
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  Lecturer in Engineering
Yehuda David Silberman,
  Lecturer in Hebrew
Vivian Silver, B.A. (McGill),
  Lecturer in English
Ruth Smith, B.A. (Queen's, N.C.), M.A. (Montreal),
  Lecturer in English
John Smola, B.Com., B.A. (S.G.W.), M.A. (Montreal),
  Lecturer in Commerce
Norma Springford, C.D.A.,
  Lecturer in Fine Arts
Samuel E. Stallard, B.Sc. (Mt.Allison), M.A. (U.N.B.),
  Lecturer in Mathematics
Anne M. Stokes, B.A. (S.G.W.),
  Lecturer in English
Edward Storr, M.A. (Oxon),
  Lecturer in Mathematics
Charles Glen Strike, C.A.,
  Lecturer in Accountancy
Gilbert C. Taggart, M.A. (Colorado),
  Lecturer in French
Louis Egon Tarandi, Dipl.Ing. (Estonia), P.Eng., M.E.I.C.,
  Lecturer in Engineering
David E. Thomas, B.A. (Wales),
  Lecturer in English
Merton Stafford Threlfall,
  Lecturer in Commerce

Hugh J. Tolan, B.A. (S.G.W.),
  Lecturer in Commerce
William Thurston Thomas Topham, B.Sc. (S.G.W.),
  Lecturer in Natural Science
Edgar J. A. Trott,
  Lecturer in Commerce
Barry Valentine, M.A. (Cantab.), B.D. (McGill),
  Lecturer in Religion
Lois Vallely, B.A. (Toronto),
  Lecturer in History
Ludwig Paul Wagner, B.A. (S.G.W.),
  Lecturer in Philosophy
Miles Gilbert Walker, B.A. (McGill),
  Lecturer in English
Yvonne Waltz,
  Lecturer in French
Clifford Werb, B.A. (S.G.W.),
  Lecturer in History
Henrietta Louise Weyland, B.A. (S.G.W.), M.A. (Middlebury),
  Lecturer in English
Orson Wheeler, B.A. (Bishop's), R.C.A., S.S.C.,
  Lecturer in Fine Arts
Mary Winspear, M.A., Ph.D. (Toronto),
  Lecturer in English
Keith White, B.Sc., B.A. (S.G.W.), M.Sc. (Miami),
  Lecturer in Mathematics
Peter Wolkove, C.A.,
  Lecturer in Accountancy
Beatrice Wrath, B.A. (S.G.W.),
  Lecturer in English
Stanley Yetnikoff, B.Com. (McGill), C.A.,
  Lecturer in English
Murray Yudin, B.Com. (McGill), C.A.,
  Lecturer in Political Science

LIBRARIANS

Keith Crouch, B.A. (Queen's), B.L.S. (McGill),
  University Librarian
Louisa Fair, M.A. (McGill)
Mary M. Cunningham, B.A., B.L.S. (Toronto)
Anna Reich-Polgar, M.A. (Pécs.), B.L.S. (Montreal)
Robert Van den Berg, B.A. (S.G.W.), B.L.S. (McGill)
Eugenie Yeung, B.A. (Manitoba), B.L.S. (McGill)

History and Aims of the University

THE HISTORY AND THE AIMS OF THE UNIVERSITY

Sir George Williams University is a Corporation chartered by the Provincial Legislature to conduct a "University within the Province of Quebec," and empowered by that Charter to grant the appropriate degrees, diplomas, and certificates.

It is the concentration of formal education in the Montreal Y.M.C.A., and developed from the formal educational work of that Association which was inaugurated in 1873, and took the form, at that time, of unit evening courses in vocational and general educational subjects, later co-ordinated into the system known as the Y.M.C.A. schools.

In 1920, the Evening High School was inaugurated to meet the educational needs of young men employed in Montreal, and in 1926, the name Sir George Williams College was adopted, to designate from that time forward, the expanding formal educational program of the Young Men's Christian Association in Montreal. (Sir George Williams was the founder of the Y.M.C.A. in London, June 6, 1844, seven years before it was established in Canada, when, in 1851, in Montreal, the first Y.M.C.A. in North America was established.) At the same time, the College was made co-educational.

In 1928, the Association held a building campaign for $1,500,000, part of which sum was to provide enlarged facilities for the work of the College.

In 1929, the College program was extended to include the first year of studies at the university level in Arts, Science, Commerce, and pre-Engineering, in the evenings, only. From that time onward, the growth of the institution, particularly in its university level courses, has grown yearly and rapidly. In 1931, in spite of the depression, the Junior College was organized, offering two full years of University work in Arts, Science, and Commerce, and leading to the Diploma of Associate, and in 1932, day courses were inaugurated for the first time, providing pre-professional and Associate programs of study in the same three fields. Finally, in 1934, the two year programs in Arts, Science, and Commerce were expanded to four-year curricula culminating in the award of the Bachelor's Degree in Arts, Science, and Commerce. The members of the first class graduated in 1936.

During these years the College was conducted under a Charter of the Montreal Young Men's Christian Association (consolidation, June 1888). In March, 1948, however, it was granted a Charter in its own right as a college or university (Quebec, No. 175, 12 George VI, 1948), establishing it a body corporate and politic. By special by-law of agreement, however, it still operates as the formal educational arm of the Montreal Young Men's Christian Association, and as such characteristically is still primarily concerned with young men and women who are employed in the day and in their full development as persons, spiritually, intellectually, and socially, through the medium of its formal educational programs and related extra-curricular activities. But in spite of this emphasis and concern for its evening classes, an expanding program of full-time studies for day students is constantly being developed to meet the needs in this area. And, although Sir George Williams is fundamentally a Christian institution, and Christian education therein is of the utmost importance, its doors are open without discrimination to all those of other faiths who wish to come.

In 1952, the Association held a building campaign for $3,300,000, the major part of which provided the college with a new building especially designed and built to accommodate its activities, hitherto housed in its rapid expansion in inadequate and temporary "annexes" throughout the neighbourhood. In 1956, the College occupied a new building constructed especially for its use from funds contributed by the community. Already, these new quarters are being used beyond their maximum capacity. After continuing study the university has decided to expand its facilities, and an additional building is anticipated for 1965-66. The University is still studying, intensively, its future and the ways in which it can make an even larger and better contribution to the community. A first step in this direction was made in 1957 when a three year Engineering program was added to the curriculum, and plans have recently been approved to expand this to a full five-year program. In 1961, the first Honours programs were announced, and others will be announced in the future.

With its efficient new building, and without a campus, located as it is in the heart of downtown Montreal where it is most readily accessible to its students, Sir George Williams has grown over the years, not only in numbers, but in the acceptance and esteem of its community and among other institutions of higher learning. Its status was clarified on December 18, 1959, when the Provincial Legislature passed an amendment to its act of incorporation changing its name to Sir George Williams University.

The fundamental educational philosophy of Sir George Williams University is that its chief concern shall be the development of persons, through the medium of formal education and its correlated activities. It is recognized that this is not accomplished by mere rote learning. While the subject matter of the curriculum is divided into "courses" for the sake of convenience in administration, the primary aim of the University is that students shall grow in character and personality as well as in those techniques and appreciations which may be required in full and satisfactory living. The units which go to make up such growth may be conveniently classified as attitudes, abilities, and skills. It is the development of these that the University endeavours to foster in its students.

This principle is not in the least opposed to good scholarship. On the contrary, scholarship can be sound only when it is vital, when it is a living process. For example, attitudes, or ways of feeling toward individuals, institutions, and other elements of one's environment, are as much a part of a person's growth as is the attainment of information, important though this may be.

Because of varying interests, aptitudes, and vocational aims, a modern educational institution must provide a wide range of educational experiences for its students. In the University these experiences, traditionally called the "curriculum", are divided into three broad areas of life, viz.: (a) the nature of the world in which we live (the Natural Sciences), (b) the nature of man and of the society of which he is a part (the Social Sciences), and (c) the cultural heritage of thought, language, and the arts which, though it reaches back to the dawn of history, is being continuously remade in our day (the Humanities). Believing that educated people should come into intimate contact with all of these areas of life, it is provided that the academic experience of every student shall include work in each of these major fields. One attempt to accomplish this is the provision of the three exploratory or survey courses in these three fields. The emphasis placed upon the study of contemporary English literature and of modern writings in the fields of science, social science, and the arts is another indication of this point of view. A fourth division of the University curriculum (Commerce), while distinctly practical and vocational in emphasis, is related in teaching and course content to the basic philosophy of the University, since that philosophy is based on the belief that there is no genuine conflict between the learning skills and the development of persons, that if sound personal attitudes are to be developed they may be as readily developed in so-called "vocational" courses as in those that are more traditionally academic in nature. Students following the Commerce Curriculum may take a large part of their work in the other three major fields.

The members of the staff of Sir George Williams University are wholly devoted to the teaching and guidance of students. Contacts between faculty members and students are by no means confined to the classroom and, while students are encouraged to do independent and constructive work, staff members are always available for consultation.

Degrees, Diplomas and Certificates

DEGREES OF BACHELOR. The degrees of Bachelor of Arts, Bachelor of Science, and Bachelor of Commerce are awarded upon successful completion of four-year courses of study in the Day Division of the University (Faculties of Arts, Science, and Commerce) or the equivalent in the Evening Division.

DIPLOMAS OF ASSOCIATE. For students who plan to spend less time in study beyond high school graduation than is required for a Bachelor's degree the University offers three two-year programmes (longer in the Evening Division) leading to the diplomas of Associate in Arts, Associate in Science, and Associate in Commerce. Work done in fulfilment of the requirements for the Associate's diploma is applicable, of course, for credit toward a degree.

DIPLOMA IN ASSOCIATION SCIENCE. This diploma is awarded to students training for the Y.M.C.A. secretaryship, for professional training taken concurrently with studies for the Bachelor's degree.

CERTIFICATE IN ENGINEERING. Students who successfully complete the required program in Engineering will be awarded a Certificate in Engineering.

CERTIFICATE OF CREDIT. Students taking partial programmes, i.e., those who are following one or more subjects but are not proceeding to a degree or diploma, are awarded a Certificate of Credit in each subject upon completing the required work and passing the required examination, upon request to the Registrar.

Enrollment

The total enrollment of Sir George Williams University and the Sir George Williams Schools during the regular winter session of 1961-1962 was 12,653 individual students. Of these 8,363 were in the University (Faculties of Arts, Science, and Commerce), day and evening divisions. During the summer session, 1961, there were 4,182 individual students enrolled in the University and Schools. Of these, 2,611 were in the University.

Men and Women Students

The University is co-educational, women being admitted to all courses on the same basis as are men.

Evening Division

For employed men and women who for financial or other reasons are unable to attend university by day the Evening Division of the University offers the same programmes and courses of study as are available in the Day Division.

The outlines of the various courses of study, on pages 111 to 178 of this Announcement, apply to both Day and Evening Divisions. The standard of achievement demanded of the students in the Evening Division is strictly that of the Day Division, the subject matter is the same and equal academic credit is allowed.

Partial course students also are enrolled in the Evening Division, except in the Engineering Division. These include all those who wish to enroll for single subjects at the college level without necessarily working toward a diploma or degree.

Facilities and Services

FACILITIES OF THE UNIVERSITY

Sir George Williams University and the five Sir George Williams Schools occupy a modern five story building, completed in 1956, on Drummond Street, the second and third floors of the Drummond Street Y.M.C.A. building immediately adjacent to it and an annex consisting of three floors of a neighbouring building. Accommodation is available for over 10,000 students in the various classes of the University and the Schools.

LABORATORIES. The University has ten well-designed and modernly equipped laboratories for the teaching of science. There is a large laboratory for general chemistry, and two smaller laboratories for advanced and physical chemistry. Four laboratories are available for Physics, including General Physics, Electricity and Magnetism, Heat and Light, Electronics, and Atomic Physics. Two laboratories are equipped for Biology, in conjunction with a teaching Museum, and plant and animal house. There is a laboratory, also, for the teaching of experimental psychology.

THREE ART STUDIOS. Three Art studios are available for work in drawing and painting, modelling and sculpture, and all phases of fine and applied art, including draughting.

CLASSROOMS. The 50 classrooms of the University are in constant use, day and evening. They are well lighted and well ventilated. Three of these rooms bear names in honour of the late D. A. Budge, Esq., the late Abner Kingman, Esq., and the late C. T. Williams, Esq. In addition there is an auditorium seating 400 students and equipped with stage, dressing rooms, and scene shop. The auditorium is named in honour of the late Colonel Gerald Walker Birks.

VISUAL INSTRUCTIONAL EQUIPMENT. In keeping with modern developments in instructional methods, the University has recently greatly increased its equipment for visual instruction. This now includes not only a wide range of charts, models, maps, and pictures for basic instruction in the sciences and fine arts, but also extensive projection equipment. This includes sound motion picture projectors, projection lanterns and microprojection apparatus. Appropriate sets of many hundreds of slides accompany this equipment. While especially useful in such fields as the fine arts, biology, and natural science, this equipment is often used in other courses. The University also owns a tachistoscope for use in effective reading courses.

LIBRARY AND READING ROOM. In charge of trained librarians, the library is increasing its holdings rapidly to keep pace with growing demands of the curriculum and the student body. Reading rooms have accommodation for one hundred and fifty students at one time.

CHAPEL. The Captain's Chapel provides, with its modern-romanesque architecture, stained glass and organ, an atmosphere conducive to quiet meditation and spiritual inspiration.

GYMNASIUM AND SWIMMING POOL. Students, on request, are entitled to Central Y.M.C.A. membership cards which provide full membership privileges to day students and limited privileges to evening students during the academic terms. In accordance with this practice students may use the gymnasia, swimming pool and other physical facilities of Central Y.M.C.A. as members. In addition, some scheduled time in these facilities is alloted for special University programs such as Athletic Nights, inter-University contests, intramural events, etc.

RESIDENCE. Sir George Williams University is a non-residential institution, and students from out-of-town are responsible for their own living arrangements. Some men students may reside in the Y.M.C.A. dormitory which occupies the building adjacent to the University. Information about such reservations should be obtained in advance from the Residence Secretary, Montreal Y.M.C.A., 1441 Drummond St.

The residence of the Montreal Y.W.C.A., within walking distance of the University, is recommended for women students. Particulars may be obtained from the Institutional Manager, Y.W.C.A., 1355 Dorchester Street West.

STUDENT PERSONNEL SERVICES

Education being considered the process of stimulating and guiding the growth of individual students, all of the incidentals of education —instructors, courses of study, textbooks, examinations—are considered valuable only in so far as they serve these ends. In addition to the fact that this concept permeates its academic work, the University has for many years maintained a programme of educational, vocational, and personal guidance for its students. While all members of the administrative staff and instructional staff are responsible for student guidance as a part of their duties, and while several of these members possess a background of experience in the techniques of such work, a trained psychologist, acting in the capacity of full-time Student Counsellor, is primarily responsible for the co-ordination and development of the student guidance programme.

Psychological Testing Program

All new students in the Day Division (freshmen and upperclassmen) are required, as part of the registration process, to complete a psychological testing program. This program is designed to collect information about the personalities and aptitudes of the students involved. Such information is subsequently used as a basis for academic, vocational, and personal counselling and guidance.

Freshman Testing and Orientation Program — September 1962.

Faculty	Testing Date	Orientation Date
Science	September 17th	September 18th
Arts	September 18th	September 19th
Commerce	September 19th	September 20th

Guidance

In recognition of the varying interests, aptitudes, and vocational aims of its students, the University has for many years maintained a programme of educational and vocational guidance. Extensive use is made of methods for determining a student's aptitudes, abilities, interests, and other personality characteristics as a supplement to this service. Any interested student is encouraged to contact the Student Counsellor and his staff concerning his orientation to university work, his problems involving study habits, the selection of suitable courses of study, and the choice of a vocation. The Counsellor is prepared to assist students with such problems at any time.

Guidance Library

A special reference library on psychological and vocational information is maintained as a supplement to these services. This library includes information on personal and industrial applications of psychology, various vocational fields, techniques of improving verbal skills, and many other topics. There is also an extensive section, known as the Careers Library, providing comprehensive up-to-date information on a wide variety of professional and business vocations.

Effective Reading

As a service to students whose problems stem from poor reading and study habits, the University offers a programme of training in effective reading. Designed to improve reading skill in all its aspects, the course consists of a series of 16mm films, tachistoscopic training, and drill exercises for directing attention to comprehension and critical reading. This course is given each year.

Personal Counselling

It is not unusual that, during the time spent in gaining an education, a student may, at one point or another, be faced with a complex personal or emotional problem. Although these problems may not directly involve university studies, they may have a serious effect on them. Since, however, these events have a direct bearing on the development of the student as a person, and since this is of importance in the philosophy of Sir George Williams University, the University is prepared to offer whatever assistance it can to students with such problems. Both psychological and psychiatric aid can be provided.

Placement

In co-operation with the National Employment Service, a Placement Office with two full time officers is provided for students of the University. Through this Office the full resources of the National Employment Service are made easily accessible to all students seeking employment. The Placement Officers are prepared to assist students and graduates in locating part-time, summer, or full time employment.

Students and their parents are urged to take full advantage of these services.

Extra Curricular Activities

EXTRA-CURRICULAR ACTIVITIES

STUDENT ORGANIZATIONS. The University encourages and supports student activities and organizations in the belief that through such endeavours and associations much real benefit may accrue to students. The Students' Undergraduate Society in the Day Division, and the Evening Students' Association in the Evening Division, are responsible for the initiation and control of a wide range of student programs of both a cultural and social nature. Annual student activity fees for Day Division students are listed on page 66. Evening Division student activities are financed by a grant from the University.

THE FINE ARTS. In order to enrich college life, students are encouraged to join the University Choir, or to participate in dramatics, under professional supervision and direction. The library, also, contains a large selection of musical recordings which are available for students to hear.

ATHLETICS. The University is a member of the Ottawa-St. Lawrence Intercollegiate Athletic Association, and the Canadian Intercollegiate Athletic Union. Representative teams in most sports are sponsored, and participation in intercollegiate athletics is encouraged. A regular program of intramural sports is conducted each year, and special interest activities such as curling, bowling, badminton, swimming, fencing, etc., are encouraged. The program is governed by the University Athletic Council which has representation from the student body, the Faculty Council, Association of Alumni, and the University Board of Governors.

WORLD SERVICE. As part of the world-wide movement of the Young Men's Christian Association, organized in about 70 countries in all parts of the world, the University participates each year in the support of the World Service Fund of the Association. This fund is used to assist the indigenous Y.M.C.A. movements in about 26 countries which require aid from the International Committee. Once each year a "World Service Week" is held in the University, during which students, staff, Board of Governors and other interested friends are given the opportunity of making a voluntary contribution in aid of this important work.

Garnet Key Society

The Garnet Key Society is an Honour Society instituted for the purpose of representing the University as hosts for the University

at special events; to orient students to University life; and to provide general assistance to the University and its legally constituted entities.

A Garnet Key Society member may be identified by uniform while on duty. Male members wear a garnet jacket, white trousers, and Garnet Key tie, while female members wear a white blazer and garnet skirt.

Student Publications

The student weekly newspaper, The Georgian, is financed by a grant from the Students' Activities fee and like all student publications, is governed by the Student Publications Commission.

The university annual is also published and financed by a grant from the Students' Activities fee and governed by the Student Publications Commission.

Eligibility

Participation in inter-collegiate athletics is dependent upon satisfactory academic performance, and students may not compete for outside organizations without written permission from the Athletic Council. These regulations are academic in nature, and are designed to prevent a student from being involved in a programme which is detrimental to his scholastic progress.

Responsibility of University

While every reasonable precaution will be taken to prevent accidents, students are reminded that participation in athletics and other curricular or extra-curricular activities in the University is entirely at their own risk. The University accepts no responsibility for the loss of personal effects.

Graduates

ASSOCIATION OF ALUMNI. The Association of Alumni was organized by the first graduating classes of the University in 1937, to perpetuate the fellowship established in their years at the University, to preserve an interest in education, and to work extramurally for the welfare of the University. Each University undergraduate automatically becomes a member upon graduation and eligible for all the benefits of membership. The Association publishes a quarterly magazine—The Post Grad—which is sent to all members and any others interested in the University, and is always ready to give assistance or advice to any undergraduate or graduate.

STUDENT LOAN FUND. The Association of Alumni Student Loan Fund grants financial assistance to students. These loans are based solely on the student's financial need. All loans are repayable within two years of graduating from or leaving the university, or if the student continues his studies elsewhere, upon graduating from or leaving that College or University to which he may transfer.

KENNETH E. NORRIS MEMORIAL LECTURES. In 1961, the Association of Alumni, in co-operation with the University and the Student Societies inaugurated an annual series of guest lectures by outstanding men of our time in memory of the late Kenneth E. Norris, Principal of Sir George Williams College from 1936 to 1956.

Scholarships

SCHOLARSHIPS AND BURSARIES

The Mount Royal IODE Scholarship: To be awarded to a first year Science student, Day Division, at the end of the 1958-59 academic year. The student must be Canadian by birth. The award will cover tuition and related University fees during the four years leading to the Bachelor of Science degree providing satisfactory academic progress is made each year by the student.

Imperial Order Daughters of the Empire War Memorials I and II: In order to perpetuate the memory of the men and women who gave their lives in the defense of the Empire in World Wars I and II, the Imperial Order Daughters of the Empire established these memorials, of which the leading feature is post-graduate scholarships (Overseas). Each scholarship is of the value of $2,000.00 a year. The Order expects that all who hold these scholarships will return to Canada and work here after the completion of their work in a British university. The scholarship is awarded by a committee of selection appointed in each province. Applications must be submitted by October 15th to the I.O.D.E. Provincial Educational Secretary.

Commonwealth Scholarship: Under a plan drawn up at a conference held in Oxford in 1959, each participating country of the Commonwealth offers a number of scholarships to students of other Commonwealth countries. These scholarships are mainly for graduate study and are tenable in the country making the offer. Awards are normally for two years and cover travelling, tuition fees, other university fees, and a living allowance. For details of the awards offered by the various countries consult the Registrar's Office or write to the Canadian Universities Foundation, 77 Metcalfe Street, Ottawa.

Abner Kingman Scholarships: In the evening division only, five scholarships of $50.00 each, endowed by personal gift of the late Abner Kingman in 1928, awarded annually to students who have attended the University for at least one academic year and who show great promise.

D. A. Budge Memorial Scholarships: In the evening division, a series of scholarships in memory of the late D. A. Budge from the bequest of the late W. G. Cheney, tenable in Sir George Williams High School. Four of these scholarships are tenable in the first year of the University in the evening division, on the basis of work done in the final year of the High School.

Birks-Beaton Memorial Scholarship: Established by the Metropolitan Board of the Montreal Y.M.C.A. in memory of the late Gerald W. Birks, President of the Young Men's Christian Association of Montreal from 1922 to 1950 and the late John W. Beaton, General Secretary from 1920 to 1951. This scholarship of $150 is to be awarded annually, when merited, to a Y.M.C.A. fellowship student on the basis of academic standing after having completed at least one year at Sir George Williams University.

Birks-Beaton Memorial Bursary: This bursary of $150 is awarded annually, when merited, to a Y.M.C.A. fellowship student in his or her first year at the University by the Metropolitan Board of Montreal Y.M.C.A. It is established in memory of the late Gerald W. Birks, President of the Young Men's Christian Association of Montreal from 1922 to 1950 and the late John W. Beaton, General Secretary, from 1920 to 1951.

John W. Ross Memorial Scholarship: In the day division, this scholarship is established by the family of the late John W. Ross, President of the Young Men's Christian Association of Montreal from 1905 to 1915. $150.00 is awarded annually to a Y.M.C.A. Fellowship student on the basis of academic standing after having completed at least one year at Sir George Williams University.

The Montreal Hi-Y Scholarship: A scholarship of $150.00 per year, for a maximum of a four year period, is to be offered annually to a Montreal high school graduate who has been, in his or her final year at high school, an active member of a Hi-Y Club. Selection will be based on academic standing, activity and service in Hi-Y and leadership potential. Applications for this scholarship must be submitted before August 15th each year.

Sir George Williams University Memorial Scholarship: In the day division, this Scholarship was established by the Veterans' Society and other students of Sir George Williams University in 1949, and maintained by them in subsequent years. A four year scholarship, covering tuition fees, for courses at Sir George Williams University in the Faculties of Arts, Science, or Commerce, for a son or daughter of a serviceman or servicewoman of the Canadian Armed Forces who died during or due to World War II (1939-1945). A student receiving this scholarship in his first year will receive it in subsequent years provided he maintains the required standards. Further particulars may be obtained from the Registrar.

Children of War Dead (Education Assistance) Act provides fees and monthly allowances for children of veterans whose death was attributable to military service. Enquiries should be directed to the nearest District office of the Department of Veterans Affairs.

National Council of Jewish Women of Canada Bursaries: In the day and evening divisions bursary awards are provided according to financial need. Particulars may be obtained from the Dean. It is expected that students will undertake to repay grants after graduation.

PEO Scholarship: In the Day or Evening Division, a scholarship of $50.00 is awarded annually to a student in any year who demonstrates scholastic ability and has the need of financial assistance to pay tuition fees.

The Hugh Millar Scholarship Fund: The sum of $500.00 is made available to Day or Evening Engineering students, in any year,

who have good academic achievement and who need financial assistance to pay for tuition fees. Applications for these scholarships must be submitted to the Asst. Dean before August 15th.

The Hugh Millar Loan Fund: The sum of $500.00 is made available to Day or Evening Engineering students, in any year, who have good academic achievement and who need financial assistance to pay tuition fees. This loan is repayable after graduation from the University in accordance with regulations established for the University Loan Fund.

Riddell, Stead, Graham & Hutchison Service Award: Awarded annually to a third year Commerce student entering fourth year with the intention of continuing studies with a practising firm of Chartered Accountants on graduation. The award, consisting of payment of tuition and other fees for the final year, will be made, on recommendation of the Senior Professor of the Commerce Division. Application should be made at the Student Counsellor's Office not later than February 28.

Malcolm Jacob Weiner Memorial Scholarship: A sum of $50.00 available annually for the tuition of any needy student at Sir George Williams University.

Professor John Hughes Scholarships: In the Day Division two scholarships of $250.00 each to be awarded annually to two students with high scholastic standing in Arts or Science. Awards to be made by the Scholarship Committee on the basis of merit and not by application.

Imperial Oil Undergraduate Scholarships: The Imperial Oil Limited offers annually eleven scholarships for undergraduate study, open to children and wards of employees and annuitants of Imperial Oil Limited and its Canadian subsidiaries. One of these scholarships is available to students completing grade eleven in Quebec. These scholarships entitle the holder to $700.00 per annum for a period up to four years. Further information and application forms, which must be submitted by June 1st, may be obtained from the Secretary of the Imperial Oil Scholarship Committee, 111 St. Clair Avenue West, Toronto 7, Ontario.

L. W. Anderson Scholarships and Bursaries: In the Day and Evening Divisions, a fund of $500.00 per annum to be awarded at the discretion of the Scholarship Committee on the basis of need and academic standing.

Norman P. Woods Scholarships and Bursaries: In the day and Evening Divisions, a fund of $500.00 per annum to be awarded at the discretion of the Scholarship Committee on the basis of need and academic standing.

F. B. Walls Scholarships and Bursaries: In the Day and Evening Divisions, a fund of $1,000.00 per annum to be awarded at the discretion of the Scholarship Committee on the basis of need and academic standing.

J. H. Andrews Limited Scholarship: In the Day Division, a sum of $1,000.00 to be awarded to a student who has completed the first year of the Commerce degree curriculm. The award is to be distributed over the remaining three-year period of study. Satisfactory scholastic standing will be expected at the end of each academic year. The recipient must be a Canadian citizen.

Zeller's Scholarships: In the Day and Evening Division, two scholarships of $100.00 each, to be awarded on the basis of high scholastic achievement in the third year of the Commerce degree curriculum.

The John Crawford (NOMA) Bursary: $100.00 will be awarded annually as a bursary to a deserving student in the evening division of the Commerce Faculty in memory of the late John Crawford, Charter Member and First President, 1938-40, Montreal Chapter, National Office Management Association, International President, 1941-42, N.O.M.A., lecturer at Sir George Williams University for many years, and who showed an interest and devotion to matters of education worthy of special recognition by his associates in N.O.M.A.

The Maynard Metcalf Scholarship: In the day division, a scholarship of $100.00 awarded to a student in any year or faculty for outstanding scholastic achievement during the preceding academic year.

Royal Albert Lodge: The sum of $400.00 to be awarded as Scholarships or Bursaries to a) Children of members of the Royal Albert Lodge b) Children of members of other Masonic Lodges c) If neither a) nor b) qualify, any worthy student may apply and receive the Scholarship or Bursary at the discretion of the University.

Consolidated Paper Corporation Limited and Subsidiaries Scholarships: In recognition of the importance of assisting youth who have the required ability and qualities of leadership and to defray expenses required to obtain a university education, an annual Scholarship of $500.00 tenable for four years is awarded to an entering day student in the Faculty of Commerce. Preference will be given to the son, daughter or legal ward of a permanent (or deceased), employee of the corporation.

Touche, Ross, Bailey & Smart Scholarship: This scholarship is in the amount of $200.00 and will be awarded annually to a student who is completing his third year and will be entering his final year, majoring in Accountancy in the Faculty of Commerce, and who intends on graduation to pursue the qualification of Chartered Accountant. The award will be made by the Scholarship Committee on the basis of academic record, ability, personality and other suitable characteristics. Application should be made before Feb. 28th.

Continuation Scholarships: In the day and evening divisions, twenty scholarships of $100.00 each will be awarded each academic year by the university to students who, having completed one academic year at the University, have need of financial assistance. The award will be made on the basis of need and academic standing.

Applications for this scholarship must be submitted before August 15th.

Entrance Scholarships: In the day division, ten scholarships of $300.00 each have been offered, by the Board of Governors of Sir George Williams University, each year for several years, to promising first year students entering the University. These scholarships are awarded on the basis of:

    (a)   standing in the High School Leaving examinations;
    (b)   scholastic ability;
    (c)   economic need.

Applications for this scholarship must be submitted before August 15th.

The Canadian Federation of University Women Fellowships

The Travelling Fellowship ($2500) and the Margaret McWilliams Fellowship ($2000) are open to any woman holding a degree from a Canadian University, whose domicile is in Canada (although she may be studying elsewhere at the date of application) and who wishes to do post-graduate study or research outside Canada. Preference will be given to candidates who have completed one or more years of graduate study and who have a definite course of study or research in view.

The Junior Fellowship ($1500) is open to any woman holding a degree from a Canadian University who is not more than 25 years of age at the time of award and whose domicile is in Canada. Preference will be given to students who have studied in only one University and who wish to continue their studies in another.

The Professional Fellowship ($1500) is open to any woman holding a degree from a Canadian University, whose domicile is in Canada. Preference will be given to candidates who have completed one or more years of professional work and who wish to spend a year at an accredited Library School, College of Education, or similar professional school.

The Sir George Williams Memorial Scholarship, the Consolidated Paper Corporation Scholarship, the Royal Albert Lodge Scholarship or Bursary, the Riddell, Stead, Graham and Hutchison Service Award, The Canadian Federation of Universities Women Fellowships, the Touche, Ross, Bailey and Smart Scholarship, the Entrance Scholarships are awarded on the basis of application. Unless otherwise stated, the application must be made to the Assistant Dean (Student Affairs) before August 15th.

The other Scholarships listed above are awarded on the basis of work done in the University or Schools and not upon application.

Prizes

PRIZES

Governor-General's Medal. A medal, presented by His Excellency the Governor-General of Canada, will be awarded annually to the graduating student showing the highest achievement in the field of English language and literature.

Le Prix Villard founded by the students in the French Classes of the University in 1942-43 "pour récompenser, chaque année l'étudiant qui s'est le plus intéressé et distingué dans l'étude de la langue et de la littérature françaises," and continued since his death, as a memorial to the late Dr. Paul Villard, by one of his former students, Mr. Yves Gallet.

The Board of Governors Medal for Creative Expression awarded annually, when merited, by the Board of Governors of the University to the student or students giving evidence of outstanding ability in creative expression in the fine arts,—creative writing, oratory, drawing, painting, drama, or music.

First Graduating Class Award. The first graduating class of the Faculty of Arts, Science and Commerce, known as the Guinea Pig Club, a name symbolic of their pioneering experience, makes a presentation, when merited, to the student who is adjudged to have made the most outstanding new contribution, either academic or extra-curricular, to the student life of the University.

Association of Alumni Award awarded annually, when merited, to the graduating student, who, in the opinion of the Faculty Council of the University, has by his activities, achievements, and interest, during his term at the University, won the outstanding commendation and respect of his fellows and of the faculty.

The Mappin Medal awarded annually, when merited, by Mappin's Ltd. of Montreal to the highest ranking graduating student in Science.

The Charles E. Frosst Medal awarded annually, when merited, by Charles E. Frosst & Co., to the highest ranking graduating student in Commerce.

The Birks Medal awarded annually, when merited, by Henry Birks & Sons (Montreal) Ltd., to the highest ranking graduating student in Arts.

The Lieutenant-Governor's Silver Medal for History: Awarded annually, when merited, to the student with the highest standing in the History Major.

The Lieutenant-Governor's Bronze Medal for Mathematics and Physics: Awarded annually, when merited, to the student with the highest standing in the major in Mathematics and Physics.

Psychological Association of the Province of Quebec: Awarded annually, when merited, to a student who has done outstanding work in Psychology.

The Chemical Institute of Canada Prize awarded annually to the best third year student entering fourth year and majoring in Chemistry.

The C.I.L. Prize in Chemistry, a cash prize of $50.00 to be awarded to the graduating student with the highest standing in Chemistry courses.

The Sun Life Prize in Economics awarded annually, when merited, by the Sun Life Assurance Company of Canada, to the graduating student with the highest standing in the Economics Major.

The Canadian International Paper Company Prize in Biology, a cash prize of $100.00 to be awarded annually, when merited, to the graduating student with the best record of work in the field of Biology.

Hebrew Culture Organization of Canada Prizes, Samuel Kizell Memorial Prize of $50.00 awarded annually, for excellence in the study of the Hebrew language.

An additional prize of $50.00 awarded annually, for excellence in the study of the Hebrew language.

The Investment Dealers Association of Canada Medal, awarded annually to the student who obtains the highest standing in Corporation Finance.

The Systems and Procedures Association Prize, awarded annually to the students who attain highest standings in each of developing effective systems and procedures and integrated data processing.

The Morris Chait Memorial Prize in Engineering, awarded annually, when merited, to the highest ranking student completing the Certificate in Engineering programme.

Merit Award, The Society of Chemical Industry–Canadian Section, awarded annually, when merited, to the student in chemistry with the highest standing in the final year of his course.

Admission and Advanced Standing

ADMISSION TO THE UNIVERSITY

Classification of Students

(1) UNDERGRADUATES: Undergraduates are students who, at the time of registration, meet the full admission requirements to the University and enrol with the intention of completing the work required for a degree or diploma. If the student is ultimately proceeding towards a degree, he will be classified as an undergraduate whether he be taking several subjects or only one in any given year.

(2) PARTIAL COURSE STUDENTS: Students who at the time of registration do not expect to proceed to a degree or diploma are classified as partial course students irrespective of the number of subjects they may be following in any given year. Students who register as partial students are not considered to have matriculated and have no standing towards any degree at the University. If a partial student later transfers to undergraduate standing, he may receive credit towards his degree for the courses already taken, but only in so far as these courses will apply towards the degree requirements at the time of transfer.

REQUIREMENTS FOR ADMISSION TO UNDERGRADUATE STANDING IN THE UNIVERSITY

(Faculties of Arts, Science, and Commerce):

The University reserves the right to refuse admission even when the stated requirements for entrance have been satisfied.

In addition to the requirements listed below, students entering the Day Division must also present a satisfactory High School Principal's Report (see University Application form). The University may at its discretion require certain students to take prescribed tests. All applicants are required to submit evidence acceptable to the University of facility in English. The following evidence is acceptable: (a) Standing in in English with the required degree of scholarship on the Provincial High School Leaving Certificate or on other certificates recognized by the University as equivalent. (b) The Certificate of Proficiency in English issued by the Universities of Cambridge or Michigan, or satisfactory achievement in the University of Michigan English Language Test.

(1) ADMISSION TO UNDERGRADUATE STANDING IN ARTS: Students must present satisfactory proof of graduation from high school with an average of at least 60% on ten papers on the Quebec High

School Leaving examinations, or the equivalent, including papers in English Literature and Composition. Applications for the fall term must be submitted by August 24th.

(2) ADMISSION TO UNDERGRADUATE STANDING IN SCIENCE OR ENGINEERING: Students must present satisfactory proof of graduation from high school with an average of at least 60% on ten papers on the Quebec High School Leaving examinations, or the equivalent, including papers in English Literature and Composition, Algebra, Geometry, and at least one Science. Applications for the fall term must be submitted by August 24th.

(3) ADMISSION TO UNDERGRADUATE STANDING IN COMMERCE: Students must present satisfactory proof of graduation from high school with an average of at least 60% in not fewer than ten papers on the Quebec High School Leaving examinations, or the equivalent, including papers in English Literature and Composition, and Algebra. Applications for the fall term must be submitted by August 24th.

(4) ADMISSION TO 2ND YEAR STANDING IN ENGINEERING: Students must present satisfactory proof of having successfully passed the following subjects on the Senior High School Leaving examinations, or in the first year program of the Science Faculty at Sir George Williams University or another recognized university: English Literature, English Composition, Algebra, Trigonometry, Analytic Geometry, General Physics, Inorganic Chemistry, and an optional subject. Applications must be submitted by August 15th, and applicants are advised that as only a limited number of students are accepted, admission will be made on a selective basis.

(5) ADMISSION ON MATURE MATRICULATION: Persons over 21 years of age who have not satisfied the technical requirements for high school graduation but who have the capacity to do university work are admitted as "conditioned" undergraduates in Arts, Science, or Commerce (but not in Engineering) by fulfilling the Special Entrance Requirements for Persons over Twenty-one Years of Age. Details regarding these requirements may be obtained from the Registrar.

(6) REQUIREMENTS FOR ADMISSION TO THE UNIVERSITY AS A PARTIAL COURSE STUDENT: In the case of students wishing to enroll for partial courses or unit subjects in the Evening Division, high school graduation is expected but may be waived for students over twenty-one years of age except in the case of those subjects in which successful university work is absolutely dependent upon preliminary work in the same subject taken at the high school level. Certain unit courses in the University, however, are not dependent upon work completed in the high school. Students wishing to register for such unit courses, as Partial Course Students, are required, therefore, only to be over twenty-one years of age

and to have had through other experience the essential background for the course. Although the University will follow this policy of admission of Partial Students, it reserves the right of decision as to the student's eligibility for each separate course applied for, and the right to ask for proof of High School Graduation in certain cases.

While such partial course students and students following single courses of interest are expected and encouraged in the Evening Division of the University, priority will be given to fully matriculated students proceeding towards one of the diplomas or degrees. No partial students will be accepted in the Engineering Division.

Sir George Williams High School

Applicants for admission to the Faculties of Arts, Science, and Commerce, whose entrance certificates do not quite meet the requirements, may make up the deficiency in the Evening High School, before entering the University.

LIST OF EQUIVALENT CERTIFICATES

The following certificates are accepted as fulfilling the requirements for entrance to the first year of the University provided that a standing equivalent to 60% average on the Quebec High School Leaving Certificate is indicated.

Province of Quebec

a. The High School Leaving Certificate (Protestant or Catholic). (A grade 12 certificate is required from the French-Speaking High Schools).

b. The Graduation diploma of Sir George Williams High School.

c. The Junior School (or Matriculation) Certificate of the several Universities.

d. The Graduation diplomas of certain secondary schools.

e. Completion of "Rhetorique" in one of the classical colleges.

Other Provinces of Canada

a. NEWFOUNDLAND: The Grade XI Public Examination Diploma.

b. NOVA SCOTIA: The Grade XI Certificate.

c. PRINCE EDWARD ISLAND: The Second Year Certificate, Prince of Wales College.

d. NEW BRUNSWICK: Junior Matriculation or High School Leaving.

e. ONTARIO: The Upper School Certificate, or Grade XIII. Students holding this certificate will be admitted to the second year of courses in the University. Students from Ontario who hold *only* the Middle School Certificate will not normally be accepted.

f. MANITOBA: The Grade XI Certificate.

g. SASKATCHEWAN: The Grade XI Certificate.

h. ALBERTA: The Grade XII Certificate. Students holding this certificate will be admitted to classes in the second year of the University. Students holding *only* the Grade XI Certificate from Alberta will not normally be admitted.

i. BRITISH COLUMBIA: Junior Matriculation Certificate.

United States

a. The Board of Regents Certificates, State of New York.

b. The graduation diploma of accredited High Schools.

Other Certificates

Certificates other than those mentioned above may be submitted to the Registrar for examination and evaluation.

APPLICATION FOR ADVANCED STANDING

Students who wish to apply for advanced standing upon the basis of work already completed in other colleges or universities should understand the following conditions:

1. Each application for advanced standing is considered individually, on its merits. Official transcripts must be mailed directly from the former university attended before the advanced standing can be considered.

2. A student presenting evidence that he has completed one year of university work elsewhere will normally be admitted to the second year at this University. It is provided, however, that if such a student's first year selection of subjects has not coincided with the major curricular requirements of the University, the deficiency must be made up in the second year.

3. A student presenting Senior Matriculation, Senior High School Leaving, or Upper School Certificates, will, in general, be given credit for the first year, course for course, for subjects completed. The University however may require certain courses not included in these certificates to be made up in the second year.

4. A student transferring from other universities to the third or fourth year may be given full standing for the first and second years of his work depending upon the programme previously followed. The University will have the right to insist that certain courses not taken in the first or second year be included as part of the third or fourth year's work where this seems advisable.

5. In order to obtain a degree or diploma in the University, a candidate must do the equivalent of at least one full academic year's work (including the final year) in the University irrespective of the amount of pro tanto credit allowed. (In the Evening Division this is interpreted to mean that a student must complete at least five full courses over a period of at least three four-month terms.) This regulation applies to students presenting certification of more than one year's work in another college or university, and also to graduates of Sir George Williams University who may wish to qualify for a second Bachelor's degree in a field other than that in which they were graduated. The University does not encourage the practice of students qualifying for several degrees at the Bachelor level. In no case will the University grant all three Bachelor's degrees to one student without special review of the circumstances by Faculty Council.

6. Any undergraduate of the University presenting a qualifying certificate for a commission in any branch of Her Majesty's Forces will be granted one full course credit in any division (Natural Science, Social Science, or Humanities). Such credit will not apply to any of the specified courses, nor will it apply towards the five courses needed to meet the residence requirements.

7. A student will not be given credit for courses taken in another university during the same academic term in which he has been registered for courses at Sir George Williams University, unless special permission has been obtained in advance from the Registrar, nor may a student register for courses at the University if he is enrolled at the same time for studies elsewhere.

8. A student transferring from another university after a failed year will not normally be given credit for any of the courses in the failed year. If any of the courses in that year have been passed, he may, however, be allowed to substitute other courses for these instead of having to repeat them.

REGISTRATION

Enrollment must be made personally at the University offices, during the month preceding the opening of the Session (see calendar on page 4 and registration schedule, page 9.)

Anyone applying for admission to the University for the first time must provide a record of previous school and college work to accompany the application. Engineering applications must be submitted by August 15th and all others by August 24th. Notification of acceptance will be given by letter, and registration must then be completed in person during the regular registration period (see schedule on page 9.)

Notification of acceptance does not guarantee a place in classes until registration has been completed.

Course Load

Students in the Day Division will carry five courses in the first year (five and one-half courses for Science students, six and one-half for Engineering students); the remainder of the twenty-one courses will be taken over the three following years, with not more than six courses in any one year. A six course program will normally be sanctioned in only one of these three years. Students in the Evening Division will normally carry a maximum of three courses, except in Engineering.

A student with a deficiency should remove it by passing a supplemental examination or by taking a course during the summer term. Under *exceptional* circumstances a student may be permitted to make up a deficiency by taking an extra course during the regular session on written application to the Faculty Council for permission to do so.

The University Office

The University Office is on the main floor, 1435 Drummond Street. The office hours are 9:00 a.m. to 12:00 noon, 2:30 p.m. to 5:00 p.m., 6:00 p.m. to 8:00 p.m. (Saturday, 9:00 a.m. to 12:00 noon).

Fees

FEES

Any student registered for more than four courses will be considered a full time student of the University and will be charged fees as scheduled below for the Day Division.

FEES — DAY DIVISION

Tuition, per year, Arts, Science, Commerce, and Engineering 1 (exclusive of other fees below)	$300.00
Tuition, extra subjects (in addition to regular programme) each full course*	60.00
Tuition, partial course students, or individual course fee	65.00
Tuition, Engineering II and III (including laboratory fees)	450.00
Engineering Summer School, (surveying—4 weeks course)	50.00
Caution Money Deposit (Summer Survey School)	15.00
Laboratory fee, for each subject involving laboratory or practice periods in addition to lectures (Arts, Science, and Commerce)	25.00
Caution Money Deposit (made by each student and refunded, less breakages and shortages, at close of year on paid up accounts as of April 30th)	5.00
Deferred Payment fee (charged when tuition is paid in two or more installments)	5.00
Course Change fee (for each subject—payable at time of change)	5.00
Late Registration fee	5.00
Advanced Registration fee	10.00
Application fee—This fee is refundable in case of non acceptance only. In all other cases this fee is applicable to tuition fees at time of registration. Only cash, money orders, or certified cheques will be accepted	25.00
Supplemental examinations, per paper (not transferable or refundable)	5.00
Students' Activities, Annual Fee — Students' Undergraduate Society $15.00 Athletic Council 5.00	20.00
Associate Diploma fee (payable on March 1st of award year)	5.00
Engineering Certificate	5.00
Graduation fee (payable on March 1st of graduation year)	10.00
Removal of Incompletes	5.00
Transcript fee (for each issuance of Transcript of Record)	1.00
Studio fee (Fine Arts 221, 421 and 422) per month	8.00
Fee for re-reading of papers (refundable if grade is raised)	10.00
Special examination fee, per paper	15.00

A full course represents a subject studied for one full academic year of two terms. A course which continues for one term only, half the academic year is, therefore, a half-course.

FEES — EVENING DIVISION

Tuition, Arts, Science, Commerce, and Engineering 1 (exclusive of other fees below:)	
Each half-course*	$ 30.00
Each full course*	60.00
Tuition, Engineering II and III, Winter Session	225.00
Engineering, Summer School (Surveying—2 weeks course)	25.00
Caution Money Deposit (Summer Survey School)	15.00
Laboratory fee for each subject involving laboratory or practice periods in addition to lectures (Arts, Science, and Commerce)	25.00
Caution Money Deposit (made by each student taking laboratory work, and refunded, less breakages and shortages, at the close of the year on paid up accounts as of April 30th)	3.00
Deferred Payment fee (charged when tuition is paid in two or more installments)	5.00
Course Change fee (for each subject—payable at the time of the change)	5.00
Late Registration fee	5.00
Advanced Registration fee	10.00
Application fee—This fee is refundable in case of non acceptance only. In all other cases this fee is applicable to tuition fees at registration. Only cash, money orders, or certified cheques will be accepted	25.00
Supplemental examinations, per paper (not transferable or refundable)	5.00
Associate Diploma fee (payable on March 1st of award year)	5.00
Engineering Certificate (payable on March 1st of award year)	5.00
Graduation fee (payable on March 1st of graduating year)	10.00
Removal of Incompletes	5.00
Transcript fee (for each issuance of Transcript of Record)	1.00
Studio Fee (Fine Arts 221, 421, and 422) per month	8.00
Fee for re-reading of papers (refundable if grade is raised)	10.00
Special examination fee, per paper	15.00

A full course represents a subject studied for one full academic year of two terms. A course which continues for one term only, half the academic year, is therefore, a half-course.

Policy on Payment of Tuition Fees

On registration students contract to pay the full tuition fees for the courses selected for the academic year. Students under 21 years of age must be accompanied by a parent or a guardian who will sign the tuition contract, or provide the University with the written consent of the parent or guardian when making a tuition contract with the University. These contracts are binding and may be cancelled only at the discretion of the Bursar. Non-attendance in classes will not be considered a reason for cancellation of contract.

Normally, tuition and other fees are paid in full at the time of registration. With the permission of the Bursar, students may apply to pay their fees in installments. When fees are paid in installments, a minimum deposit as indicated in plan "B" on registration must be paid at the time of registration. Registration is not considered complete in any case until students have complied with the regulations of the Registrar's Office and have paid the prescribed deposit or have made arrangements for payment, approved by the Bursar.

All tuition accounts *not* paid in full on or before October 10th are subject to a deferred payment fee charge of $5.00.

All contracts are subject to revision for adjustment of errors.

The following plans are available for students who have been given permission to pay their fees in installments:

DAY

Number of Courses	Fees on registration	Plan "A" on Registration	Plan "A" Jan. 2	Plan "B" on Registration	Plan "B" 4 Monthly Payments
5	$320.00	$180.00	$145.00	$ 85.00	$60.00
5+½ lab.	332.50	190.50	147.00	89.50	62.00
5 + 1 lab.	345.00	190.00	160.00	90.00	65.00
5 + 2 labs	370.00	200.00	175.00	115.00	65.00
5 + 3 labs	395.00	215.00	185.00	140.00	65.00
5½	350.00	195.00	160.00	83.00	68.00
5½ + ½ lab.	362.50	200.50	167.00	107.50	65.00
5½ + 1 lab.	375.00	200.00	180.00	120.00	65.00
5½ + 2 labs	400.00	220.00	185.00	145.00	65.00
6	380.00	210.00	175.00	105.00	70.00

DAY ENGINEERING II AND III

Tuition Fees on Registration	Plan "A" on Registration	Jan. 2
$450.00	$255.00	$200.00

EVENING ENGINEERING II AND III

Tuition Fees on Registration	Plan "A" on Registration	Jan. 2
$225.00	$130.00	$100.00

EVENING

Number of Courses	Fees on Registration	Plan "A" on Registration	Plan "A" Jan. 2	Plan "B" on Registration	Plan "B" 4 Monthly Payments
½	$ 30.00	$20.00	$15.00	$15.00	$ 5.00
1	60.00	33.00	32.00	33.00	8.00
1 + 1 lab	88.00	53.00	40.00	41.00	13.00
1½	90.00	55.00	40.00	31.00	16.00
1½ + 1 lab	118.00	68.00	55.00	59.00	16.00
2	120.00	65.00	60.00	33.00	23.00
2 + 1 lab	148.00	80.00	73.00	57.00	24.00
2 + 2 labs	173.00	93.00	85.00	82.00	24.00
2½	150.00	81.00	74.00	39.00	29.00
2½ + 1 lab	178.00	97.00	86.00	67.00	29.00
2½ + 2 labs	203.00	113.00	95.00	92.00	29.00
3	180.00	93.00	92.00	53.00	33.00
3 + 1 lab	208.00	108.00	105.00	69.00	36.00

Withdrawals and Adjustments

Any student who is forced to withdraw from a course or from the University is required to notify the Registrar's Office in person or in writing and to give reasons for withdrawing. Withdrawals from classes do not entitle a student to refunds of fees or cancellation of contracts without the permission of the Bursar. No withdrawals will be accepted within 30 days of the end of the course.

(1) Applications for contract adjustments must be presented no later than ten days after the beginning of the University term. If a student cancels a course or courses within the ten day period the adjustment is 75% of the fee for each full course, 50% of the fee for each half course scheduled in the first term and all of the fee except the registration deposit of $10.00 for each half course scheduled in the second term. If a student cancels a second term half course during the first ten days of the second term, the adjustment is 50% of the fee. After this period no tuition refunds or adjustment are allowed regardless of the reason for withdrawal.

No adjustments or transfers of fees are allowed for course changes made after the ten day period immediately following the beginning of the term.

(2) Failure to attend classes shall not be considered a cancellation of contract.

(3) In the event that the University grants a refund, the following fees are not refundable, viz: fees for course changes; late registration; removal of incompletes; supplemental examinations; student societies; advanced registration; mature matriculation; and registration deposit.

(4) A registration deposit of $10.00 per subject (full or half-course) will be charged for cancellations before the start of the term.

A student registering for more than the normal course load is not granted any adjustment for the cancellation of courses.

Failure to make payments of tuition, fees, or other amounts owed the University, when they fall due, or to arrange for such payments before their delinquent dates, is considered sufficient cause, until the debt has been adjusted with the Bursar's Office, to (1) bar the student from classes or examinations, and/or (2) withhold diploma, scholastic certificate, or transcript of record.

Regular Officer Training Plan (R.O.T.P.)

The Armed Forces of Canada subsidize a limited number of undergraduate University students who are willing to accept a military service obligation as a commissioned officer under the provisions of the R.O.T.P.

Acceptable applicants will be enrolled in their choice of the three services (R.C.N., Canadian Army, R.C.A.F.) as an officer cadet on a career basis. Upon graduation and fulfilment of military training requirements, officer cadets are promoted to commissioned rank and are required to serve a minimum of three years immediately thereafter in the service which sponsored their training. After such service, an officer may be released at his own request provided that a period of national emergency does not exist.

Details of eligibility and admission, financial assistance and training may be obtained from the Secretary of the Faculty of the University, Mr. R. A. Fraser.

University Reserve Training Plan (U.R.T.P.)

The U.R.T.P. is designed to qualify university students for commission in the R.C.A.F. (Regular Force or one of the three Reserves —Auxiliary, Primary or Supplementary).

To be eligible for enrolment in the University Squadron, a student must be (a) between the ages of 17 years (18 years for women

applicants) and 26 years. (b) able to participate in R.C.A.F. Summer Training (c) enrolled in a university course which is a requisite of the branch for which application is made (d) medically fit to R.C.A.F. standards and (e) a Canadian citizen or British subject resident in Canada with the status of a landed immigrant.

Successful candidates are enrolled in the Primary Reserve in the rank of Flight Cadet. Each year is divided into two training periods: Winter Training and Summer Training. Normally, the Plan requires three winters and one, two or three Summers, depending on the branch of training.

Upon graduation from university and completion of the training programme, Pilot Officers are eligible to transfer to the R.C.A.F. Regular, the Auxiliary, the Primary Reserve M.A.T.P. or the Supplementary Reserve in the rank of Flying Officer.

Further details concerning the training programme, pay and allowances, etc. may be obtained from the Secretary of the Faculty of the University, Mr. R. A. Fraser.

University Bookstore

All books and supplies required may be purchased at the University Bookstore. Students should consult a book-list at the University Bookstore and be sure of the edition required before buying books.

Examinations and Advancement

EXAMINATIONS AND ADVANCEMENT

All students registered in the University are required to write the regular progress examinations held in January and the final examinations held at the close of each course.

The grades awarded as the final standing in each subject for the academic year are given on the basis of:

(1) The year's work of the student, week by week;

(2) The progress examinations;

(3) The final examinations.

The matter of satisfactory attendance and an acceptable level of expression in the English language will be given consideration in assessing the final grade for each subject. The *minimum* attendance required is 50% of the lectures in each term, although the instructor may impose a higher level of attendance than this if he sees fit.

Since January 1, 1954, course grades are awarded according to the following system:

A (Excellent), *B* (Very Good), *C* (Good), *D* (Pass), *F* (Failure—may write supplemental examination), *R* (Failure plus unsatisfactory attendance or term work—must repeat course for credit), *Abs.* (Absent from examination), *Inc.* (Term work incomplete), *S.* (Credit for supplemental examination or late completion).

June 30, 1943—Jan. 1, 1954, course grades were awarded according to the following system:

A (90-100%), *B* (80-89%), *C* (70-79%), *D* (60-69%, the lowest clear passing grade), *E* (50-59%, a conditional pass), *F* (Below 50%, failure), *Abs.* (Absent from final examination), *Inc.* (A provisional category, indicating that a passing grade might be assigned when the student had completed additional required course work.

Absences from examinations and incompletes are considered as failures.

In order to secure credit for failed courses, supplemental examinations may be written, except by a student who receives "F" grades (or the equivalent) in subjects totalling three or more full credits. Such a student may not write supplementals or remove "incompletes" by turning in belated assignments. Nor may he proceed to further studies without permission from the Registrar.

All grades (F, abs. Inc.) remain permanently on the records, and are reported in transcripts, even if credits are obtained subsequently by passing supplemental examinations, etc.

After completion of the first year (five credits) no student may attempt more than twenty-two courses in meeting the requirements for a degree.

Supplemental Examinations and Late Completions

Supplemental examinations are held only during the special examination session in September for all students except those who might otherwise graduate at the Spring Convocation. In the case of potential graduates only, special supplemental examinations will be held in May.

Application to write supplemental examinations must be submitted to the Registrar on the form provided for this purpose, by July 26th. A fee of $5.00 per paper is charged for supplemental examinations, payable at the time of application.

Supplemental examinations must be written, and "incompletes" cleared, not later than the following September.

Credit may not be obtained in a course by examination alone. A student must have followed the course in the usual way during the regular academic year.

A fee of $5.00 is charged for each supplemental examination or late completion of course assignments.

All supplemental examinations and late completions of assignments will be graded only as "S" or "F".

Re-reading of Examinations

All examination papers graded "F" or "R" are carefully re-read by the instructor before final approval of the grade. However, any student may request, within one month of the release of grades, that his paper be re-read by a committee which includes the instructor and at least one other impartial professor. A fee of $10.00 is charged, but is refunded if the grade is raised.

ACADEMIC YEAR AND CLASS HOURS

The winter session of the university is divided into two terms; each term is three and one-half months in length. Exact dates marking the opening and closing of the various terms are to be found in the calendar on page four of this announcement.

In most cases three hours of lectures are held in each course each week in the day division. In the evening division the same courses involve only two hours of lectures per week. Fewer lecture hours per week are required in the evening division than in the day division in view of the fact that evening students as a rule are older and more mature than day students, and the extra work, if necessary, is made up in assignments completed outside of class. Additional class hours are scheduled for laboratory work where this is included in a course. Courses in the Engineering Division, however, require the same number of class hours per subject in both Day and Evening Divisions.

The class hours of each course are given in the Day Division and Evening Division timetables which should be consulted before registering.

Summer Session

The summer session of the university, which is operated in the evening division only, is three months in length. The session is held for the convenience of evening students and it is recommended that evening students who take advantage of this session do so primarily to lighten the course load in the winter session. Evening students are not advised to carry a program through both winter and summer sessions, unless at a reduced course load, for two consecutive summers. Students regularly enrolled in the Day Division of the University may not take courses for credit in the summer session unless it is to make up a credit deficiency. In all cases, students in the summer session are limited to eight class hours weekly.

ALL STUDENTS ARE ADVISED THAT THE PRESENT SUMMER SESSION PROGRAM AND POLICY ARE UNDER STUDY BY THE FACULTY, AND ARE SUBJECT TO DRASTIC MODIFICATION WITHOUT FURTHER NOTICE.

Curricula

THE ACADEMIC DIVISIONS

The various courses of study offered in the combined Faculties of Arts, Science, and Commerce are grouped in four Divisions: The Natural Sciences Division, the Humanities Division, the Social Sciences Division, the Commerce Division.

The subjects of study included in each of these Divisions of the University are as follows:

THE NATURAL SCIENCES DIVISION (Pages 112 to 129):

Biology
Chemistry
Engineering

Mathematics
Physics

THE HUMANITIES DIVISION (Pages 132 to 147):

English Language and Literature
Fine Arts
French Language and Literature
German
Greek
Hebrew
Journalism
Latin
Mathematics
Philosophy
Religion
Russian
Spanish

THE SOCIAL SCIENCES DIVISION (Pages 150 to 165):

Economics
Education
Geography
History

Political Science
Psychology
Sociology
Applied Social Science

THE COMMERCE DIVISION (Pages 168 to 178):

Accountancy
Administration
Commercial Law
Communication
Executive Training

Finance
Industrial Relations
Insurance
Marketing

CURRICULA

CURRICULUM FOR THE DEGREE OF BACHELOR OF ARTS

Students preparing for the degree of Bachelor of Arts will take 21 courses* as listed below.

First Year Arts (5 courses)

I. One of—Natural Science 210; Physics 210; Physics 211; Chemistry 211; Biology 211 or 212, and 221 or 222

II. Two of—English 211 (or 201) English 221

III. One of—Humanities 210
    a selected course in Fine Arts
    "   "   "   " a language other than English
    "   "   "   " Religion
    "   "   "   " Mathematics

IV. One of—Social Science 210
    a selected course in Economics
    "   "   "   " Geography
    "   "   "   " History
    "   "   "   " Political Science
    "   "   "   " Sociology

Second Year Arts (5 courses)

I. A selected course in the Natural Sciences Division.
II. A selected course in English literature.
III. A selected course in the Humanities Division.
IV. A selected course in the Social Sciences Division.
V. A selected course in any Division.

Third and Fourth Year Arts (6 and 5 courses)

Students must take eleven further courses through the two years, with a maximum of six courses in any one year. At least six of these eleven courses must be from the Humanities and/or Social Sciences Division.

At least seven of the total of twenty-one courses required for the degree must be selected from courses at the "B" level (courses numbered in the 400's in the announcement).

To be admitted to the third year, the student must have completed, (or, if an evening student, be in the process of completing,) the requirements as outlined for the 1st and 2nd years.

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* *A full course represents three hours of class work per week for a full academic year, with the required additinoal laboratory or studio work. A three-hour course followed for one term only is therefore a half-course.*

CURRICULUM FOR THE DEGREE OF BACHELOR OF SCIENCE

Students preparing for the degree of Bachelor of Science will take 21 courses* as listed below.

First Year Science (5½ courses)

I. Two of—Physics 211; Chemistry 211;
        Biology 211 or 212, and 221 or 222

II. One and a half of—Mathematics 211; Mathematics 221;
        Mathematics 231 (or the equivalent)

III. English 211 (or 201).

IV. One of—Humanities 210
        a selected course in Fine Arts
        "   "   "   " a language other than English
        "   "   "   " Religion

        Social Science 210
        a selected course in Economics
        "   "   "   " Geography
        "   "   "   " History
        "   "   "   " Political Science
        "   "   "   " Sociology

Second Year Science (5 courses)

(Students approved for a program of studies in a "major" may carry 6 courses.)

I. Three selected courses in the Natural Sciences Division.

II. A full Course in English literature.

III. A selected course in the Humanities or Social Sciences Division.

Third and Fourth Year Science (5½ and 5 courses)

Students must take ten and one-half further courses through the two years, with a maximum of six courses in any one year. At least six of these 10½ courses must be selected from the Natural Sciences Division.

At least seven of the total of twenty-one courses required for the degree must be selected from courses at the "B" level (courses numbered in the 400's in the announcement).

To be admitted to the third year, the student must have completed, (or, if an evening student, be in the process of completing) the requirements for the 1st and 2nd years.

*A full course represents three hours of class work per week for a full academic year, with the required additional laboratory or studio work. A three-hour course followed for one term only is therefore a half-course.

CURRICULUM FOR THE DEGREE OF BACHELOR OF COMMERCE

Students preparing for the degree of Bachelor of Commerce will take 21 courses* as listed below.

First Year Commerce (5½ courses)

I. One of—Natural Science 210; Physics 210; Physics 211;
        Chemistry 211;
        Biology 211 or 212, and 221 or 222

II. English 211 (or 201).

III. Finance 231 (Students who have not passed Intermediate Algebra in High School Leaving will have to add Finance 221 or the equivalent.)

IV. Economics 211.

V. Accountancy 211.

VI. One of—Humanities 210
        a selected course in Fine Arts
        "   "   "   " a language other than English
        "   "   "   " Religion
        "   "   "   " Mathematics

        Social Science 210
        a selected course in Geography
        "   "   "   " History
        "   "   "   " Political Science
        "   "   "   " Sociology

*Note:—The registering officer may allow an *Evening Student* to defer *one* of items I or VI until the second year to enable him to take accountancy 411 sooner after the completion of Accountancy 211.

Second Year Commerce (5½ courses)

I. Administration 211.

II. English 214 and English 215.

III. A full course in English literature.

IV. One of—Commercial Law 211
        a selected full course in any division

V. Accountancy 411.

VI. Mathematics 241. (Mathematics 441 may be taken instead, by those qualified. It must be taken by students majoring in Mathematics in Commerce).

*A full course represents three hours of class work per week for a full academic year, with the required additional laboratory or studio work. A three-hour course followed for one term only is therefore a half-course.

Third and Fourth Year Commerce (5 and 5 courses)

Students must take ten further courses (9½ if Commercial Mathematics 221 has been included) through the two years, with a maximum of six courses in any one year. At least six of these ten courses must be from the Commerce Division or in Economics. At least two full courses in Economics, in addition to Economics 211, must be taken for the degree.

At least seven of the total of twenty-one courses required for the degree must be selected from courses at the "B" level (courses numbered in the 400's in the announcement), except in the case of students who are doing majors in Accountancy, Business Administration, or in General Administration.

To be admitted to the third year, the student must have completed (or, if an evening student, be in the process of completing) the requirements as outlined for the 1st and 2nd years.

CURRICULA FOR THE DIPLOMA OF ASSOCIATE

Curriculum for the Diploma of Associate in Arts

Students preparing for the diploma of Associate in Arts will take eleven courses* consisting of the first year of the program for the Bachelor of Arts degree, and the program of the second year, adding a sixth course in the 2nd year to be selected from the Humanities Division, or the Social Sciences Division.

Curriculum for the Diploma of Associate in Science

Students preparing for the diploma of Associate in Science will take eleven courses* consisting of the first year of the program for the Bachelor of Science degree, and the program for the second year, adding a half-course from any division, in the 2nd year.

Curriculum for the Diploma of Associate in Commerce

Students preparing for the diploma of Associate in Commerce will take eleven courses*, consisting of the first and second years of the program for the Bachelor of Commerce degree.

Note: As the Associate's Diploma is intended for students who terminate their studies at the end of two years, the Associate's diploma is awarded only upon advance application for it to the Registrar in the second year.

A full course represents three hours of class work per week for a full academic year, with the required additional laboratory or studio work. A three-hour course followed for one term only is therefore a half-course.

Curriculum for the Certificate in Engineering

The University now offers a three year program leading to a Certificate in Engineering, in the fields of Civil, Mechanical, and Electrical Engineering. (See page 59 for admission requirements.) Holders of this certificate may, if recommended, be admitted to the fourth year of a five year course at other Engineering Schools, where they may complete the work for a degree in Engineering, or, they may, if they elect, remain at the University for a further year of studies to complete the requirements for the degree of Bachelor of Science. The same program is offered in the Evening Division over an extended period of years. All students accepted for any year of this course must follow the full program. Students who fail in Engineering may proceed to a Science degree on a course per course evaluation of work done in Engineering that will apply to a Science degree up to a maximum of 15 credits including pre-Engineering.

Engineering I

Day students will take the program as outlined below. Evening students will require at least two calendar years to complete this program:

English 211 or 201.

English 221 or 222. (Students whose secondary education has been completed in another language may substitute an optional course in the Humanities or Social Sciences Divisions.)

Mathematics 211, 221 and 231. (Students who have completed Intermediate Algebra and Trigonometry with a grade higher than 65% may substitute Mathematics 451 and 231.)

Engineering 5213.

Physics 211.

Chemistry 211.

Engineering II

Day students will take the program as outlined below. Evening students will require two calendar years to complete this program.

Engineering 5211, 5241, 5271, 5272 (Day Students) 5273 and 5274 (Evening Students), 5321.

Mathematics 2224, 2231, 2251.

Physics 4222, 4232.

Chemistry 3231.

An option in the Humanities or Social Sciences Divisions.

Engineering III

Students will elect to follow either the option in Civil, Mechanical, or Electrical Engineering. Day students will take the program as outlined below. Evening students will require two calendar years to complete this program.

Civil Option

Engineering 5322, 5323, 5325, 5341, 5342, 5343, 5352, 5371, 5372.
Mathematics 2353, 2357.
Physics 4354.

Mechanical Option

Engineering 5311 (Mechanical) 5322, 5324, 5325, 5341, 5342, 5343, 5352.
Mathematics 2353, 2357.
Physics 4354.

Electrical Option

Engineering 5322, 5323, 5341, 5351, 5381.
Mathematics 2353, 2357.
Physics 4354, 4362.

A student in the Evening Division, registered as a candidate for the Bachelor of Science degree, may select as options any of the following courses for which he has the prerequisites.

Note: Credits obtained in this way may *not* be applied towards the Certificate in Engineering.

Engineering 5211 and 5213	Engineering Graphics	1 "A" credit
Engineering 5241	Mechanics	1 "A" credit
Engineering 5323	Geology	1 "A" credit
Engineering 5341	Advanced Mechanics	1 "B" credit
Engineering 5351	Circuit Theory	1 "B" credit
Physics 4362	Modern Physics	½ "B" credit

Courses in surveying (Engineering 5271, 5272, 5273, 5274, 5371) may be taken, but *no credit* towards a degree.

Curriculum for the Diploma in Association Science

Candidates for the Diploma in Association Science must complete the curriculum for a Bachelor's degree with five full courses from the 'basic areas of preparation for the Y.M.C.A. Secretaryship' as outlined below (including all of the 'required' courses). Students

who hold a Bachelor's degree from another recognized university may obtain the Diploma in Association Science by completing a minimum of five full courses at the University, including necessary courses in the following program:

1. **History, Philosophy and Organization of the Y.M.C.A.**
   Required: Applied Social Science 211.

2. **Christian Leadership and Interpretation**
   Required: Religion 231 and one of the half courses listed under optional.
   Optional: Religion 211, 212, 221, 222, 241; Philosophy 231.

3. **Administration**
   Required: Applied Social Science 221.
   Optional: Accountancy 211, Administration 211, 431, Industrial Relations 421, Executive Training 211, 422, 431, English 214.

4. **Leadership and Supervision of Program and Groups**
   Required: Applied Social Science 431.
   Optional: Applied Social Science 231, Education 221, English 215, 216, Fine Arts 211, 221, 239, 233, 234, 251.

5. **Guidance of Individuals**
   Required: Applied Social Science 451 or Psychology 427.
   Optional: Psychology 231, Sociology 221.

6. **Community Organization and Relationships**
   Required: Applied Social Science 441.
   Optional: Sociology 221, 441.
   (Note: Sociology 211 is a prerequisite for Applied Social Science 441).

Honours, Majors, and Special Programs

HONOURS DEGREE PROGRAMS

The University has approved programs leading to an Honours Degree in certain selected fields. An Honours degree indicates specialization within a field, and high academic standing. In order to qualify for an Honours degree, a student must meet all of the academic qualifications and comply with the stated regulations set forth below.

1. An Honours student must obtain "A" or "B" grades in all courses in the Honours Program after the introductory course in the subject(s).
2. An Honours student must obtain at least a "C" average over the total twenty-one courses of the degree program.
3. A student who fails *any* course shall be suspended from the Honours program. He may be reinstated by the Honours Committee upon recommendation from the Department(s) concerned.
4. An Honours student must meet the requirements for the general degree as well as the specific honours requirements.
5. The normal point of entry into the Honours degree program shall be at the beginning of the second academic year. (In the Evening Division, this shall be interpreted to mean at the beginning of the second group of five courses.)
   However, a student who has followed the courses prescribed for the second year of the Honours program may be admitted to the program at the beginning of the third academic year. (In the Evening Division, this shall be interpreted to mean at the beginning of the third group of five courses.)
   Regular consultation and contact with the Department(s) is an intrinsic part of an Honours program. For this reason, no student may enter an Honours program after the beginning of the third year, and no retroactive approval of entry may be made.
6. A student must complete two full years (not less than ten courses) at this university to meet the residence requirement for an Honours degree.
7. An Honours student shall consult with his Department(s).
   (a) prior to being accepted into the Honours program.
   (b) and at the end of each year.
8. A student shall be allowed to qualify for only one Honours degree in one degree program.

Honours in Chemistry

The following courses constitute an honours programme in Chemistry, provided the student maintains the required academic standing:

First year: First year Science with Physics 211 and Chemistry 211.

Second year: Chemistry 231, 411, 412, 421; Mathematics 451.

Third year: Chemistry 414, 424, 431L, 432, 490; Mathematics 455, 456.
   (A student honouring in Chemistry may take Mathematics 455 and 456 without Mathematics 431 as prerequisite.)

Fourth year: Chemistry, 413, 415, 423, 426, 433; German 215.

Honours in Mathematics and Physics

The following courses constitute an honours programme in Mathematics and Physics, provided the student meets the required academic standing:

First year: First year Science with Physics 211, Chemistry 211, and Mathematics 231 and 451 instead of Mathematics 211, 221 and 231. (Any student who has not passed Intermediate Algebra and Trigonometry in High School will take the standard first year Mathematics, but must take Mathematics 451 as an additional course during the summer session immediately following.)

Second year: Mathematics 431, 455, 456; Physics 222, 232, 440.

Third year: Mathematics 453, 454, 461; Physics 441, 452, 461.

Fourth year: Mathematics 462; Physics 451, 453, 471, 472.

Honours in Zoology

The following courses constitute an honours programme in Zoology, provided the student maintains the required academic standing

First year: First year Science with Biology 211, 222 and either Chemistry 211 or Physics 211.

Second year: Biology 221, 422. The introductory science course (Chemistry 211 or Physics 211) not taken in the first year must be taken in either the second or third year.

Third and
Fourth years: Biology 431. Three and one half credits chosen from Biology 421, 432, 433, 451, 461, 471.

Honours courses may be offered in other fields in the near future. Students interested should consult their department heads for advice on course selections in the meantime.

MAJORS IN THE CURRICULA FOR DEGREES

Majoring has been approved in the following subjects: Accountancy; Administration, Business; Administration, General; Administration, General and Marketing; Ancient Languages; Biology; Biology and Chemistry; Chemistry; Economics; Economics and History; Economics and Mathematics; Economics and Political Science; English; Fine Arts; French; Geography; History; Mathematics; Political Science; Philosophy; Physics and Mathematics; Psychology; and Sociology.

A "major" is an approved *sequence* of at least six full courses in one of the above subject matter fields, which may include certain

approved courses in other closely related fields. The term "major" as used by Sir George Williams University implies that the student has followed, within the requirements for the degree, a planned programme in a specific field. The level of scholarship required is the same as that of other programmes offered by the University.

Further information regarding majors may be found under the outlines of the specific subject matter fields listed in the following pages of the announcement.

Any student wishing to major must consult the senior instructor of the subject matter field involved for approval before planning his course sequence, and present to the Registrar a statement signed by the appropriate instructor, authorizing him to register for studies in the field of major. It is recommended that such consultation take place during a student's second year, or before commencing the third year.

If necessary the requirements for a major may be completed after graduation.

NOTE: A full course in any field is to be considered as either a course carrying one full credit, or two courses each carrying half credit.

REQUIREMENTS FOR MAJORS

Major in Accountancy*

The following courses, in an approved sequence, constitute a major in Accountancy:
Accountancy 211, 411, 412, 421, and 431.
Administration 211, 221, Commercial Law 211, 431, 441, Communication 211, Executive Training 211, and Finance 411.
English 214.
No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Business Administration*

The following courses, in an approved sequence, constitute a major in Business Administration.:
Administration 221, 251, 431, Commercial Law 211, Communication 211, Finance 411, Industrial Relations 421;
Executive Training 211, 421, 422, 431;
English 214;
Economics 221 or 424, and 451;
Psychology 211 or Administration 441.
No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

*The majors in Accountancy and Business Administration may be taken only in conjunction with the degree in Commerce.

Major in General Administration*

The following courses, in an approved sequence, constitute a major in General Administration:
Administration 431, Communication 211, Industrial Relations 421;
Executive Training 211, 421, 422, 431;
English 214,
Psychology 211 or Administration 441.
No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in General Administration and Marketing*

The following courses, in an approved sequence, constitute a major in General Administration and Marketing:
Courses required for a Major in General Administration with the addition of
Marketing 211, 411, 412;
Any one of: Marketing 221, 222, 413, 414.
No student will be accepted for the Major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Ancient Languages

The following courses, in an approved sequence, constitute a Major in Ancient Languages:
Two of the following combinations of courses—
A—Greek 211 and 212
B—Latin 211 and 421
C—Hebrew 211 and 212
And two additional courses (excluding Latin 201) from any of these three languages.
In addition, it is recommended that the following courses be taken with the Major: History 211, Philosophy 221, Fine Arts 241, English 241.
No student will be accepted for the Major until a plan of study, over the several undergraduate years, has been approved by the chairman of the department.

Major in Biology

The following courses, in an approved sequence, constitute a major in Biology:
Biology 211, 212, 221, 222, 241, 411, 422 and two additional courses in Biology.
No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

* The majors in General Administration, and General Administration and Marketing may be taken only in conjunction with the degree in Commerce.

Major in Chemistry

The following courses, in an approved sequence, constitute a major in Chemistry:

First year: First year Science with Chemistry 211 and Physics 211.

Second year: Chemistry 231, 411, 412, 421; Mathematics 451.

Third year: Chemistry 431L, 490.

Fourth year: Chemistry 413, 432.

In addition two full courses in Chemistry taken in the third and fourth years.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Biology and Chemistry

The following courses, in an approved sequence, constitute a major in Biology and Chemistry.

Biology 211 or 212, and 221 or 222, 422, 431, and one additional full course in Biology.

Chemistry 211, 221 or 421, 231, 411, 412, 441.

No student will be accepted for the major until a plan of study has been approved by the chairmen of the department of Biology and Chemistry.

Major in Economics

The following courses, in an approved sequence, constitute a major in Economics:

Economics 211, 221, 411, 412, 421, 422, 441, 442 and 451 or 461.

Mathematics 241.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Economics and History

The following courses, in an approved sequence, constitute a major in Economics and History:

Economics 211, 422, and 424.

History 211; 212 or 213; 221.

Economics 411 or History 451.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the departments of Economics and History.

Major in Economics and Mathematics

The following courses, in an approved sequence, constitute a major in Economics and Mathematics.

Economics 211, 411, 412, 421, 422, and 451.

Mathematics 211, 221 231, 241, 451, and 441.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department of Economics and Mathematics.

Major in Economics and Political Science

The following courses, in an approved sequence, constitute a major in Economics and Political Science:

Economics 211, 411, 421, 444, 445; 221 or 422.

Political Science 211, 431, and one full course selected from Political Science 251, 411, 421, 441, and 442.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairmen of the departments of Economics and Political Science.

Major in English

The following courses, in an approved sequence, constitute a major in English.

A. English 211, 221 and 253.

B. Four credits chosen from English 262, 431, 432, 433, 434, 435, 436, 454, 455, 461, 464, and 468.

C. The remaining credits chosen from English 241, 243, 244, 261, 445, 463, 465, 466, 467; 471, 472 and 481.

With the approval of the senior instructor in English a student may substitute one full credit in a related field for one of the courses listed in Section C above.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Fine Arts

The following courses, in an approved sequence, constitute a major in Fine Arts. (Note—three patterns are offered, one for students wishing to specialize in painting, one for students wishing to specialize in sculpture, and one for students seeking a general knowledge of aesthetics).

1—Fine Arts 211, 231, 241, 242, 243, 411, 412, and 461.

2—Fine Arts 221, 232, 241, 242, 243, 421, 422, and 461.

3—Fine Arts 231, 232, 241, 242, 243, 247, 453, 461.

Although not required for the major, it is recommended that the following courses be taken to supplement the major in Fine Arts:—English 261, History 211, History 213, Sociology 231, Sociology 232, and Psychology 211.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in French

The following courses, in an approved sequence, constitute a major in French:

French 211 or 212, 213, 421, 422, 423, 425, 451; 426 and 427 or 424.

Philosophy 221 or Latin 211.

One full credit chosen from English 434, 467 or Humanities 421.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Geography

The following courses, in an approved sequence, constitute a major in Geography:

Geography 211, 251, 411, 421, and 441.

Natural Science 221 and 222.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in American History

The following courses, in an approved sequence, constitute a major in American History.

(1) History 211, 212, 213, 221 or 222, 451, 471, and 472.

(2) One full credit selected from History 452, 453, 454, 455.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the senior instructor in History; such approval must be obtained before entering the third year, preferably during the spring term of the second year.

It is recommended that the major be supplemented by including courses in Economics or Political Science, chosen in consultation with the chairman of the department.

Major in European and World History

The following courses, in an approved sequence, constitute a major in European and World History.

(1) History 211, 212, 213, 221 or 222, 471, and 472.

(2) History 231 or 413 and 441.

(3) One full credit selected from History 432, 461, 462, and 481.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the senior instructor in History; such approval must be obtained before entering the third year, preferably during the spring term of the second year.

It is recommended that the major be supplemented by including courses in Economics or Political Science, chosen in consultation with the chairman of the department.

Major in Mathematics

The following courses constitute a major in Mathematics in either the Faculty of Arts or Science:

In the first year—Mathematics 211, 221, 231.

In the second year—Mathematics 431, 451.

In the third year—Mathematics 453, 454, 455, 461.

In the fourth year—Mathematics 462, 463.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Mathematics (Commerce)

The following courses, in an approved sequence, constitute a major in Mathematics in the Commerce Division:

In the First year: Mathematics 211, 221, 231. (Majoring students will postpone Finance 231 until the third year.)

In the Second year: Mathematics 431, 451. (Majoring students will not take Mathematics 241.)

In the Third year: Mathematics 441, 453, 454, 455; Finance 231.

In the Fourth year: Mathematics 461, 463.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Mathematics and Physics

The following courses, in an approved sequence, constitute a Major in Mathematics and Physics:

Mathematics 211, 221, 231, 431, 451, 453, 454, 455, 456.

Physics 211, 222, 232, 440, 441, 451, 452, 453, 461.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairmen of the departments of Mathematics and Physics.

Major in Philosophy

The following courses, in an approved sequence, constitute a major in Philosophy:

Philosophy 211, 221 and four other full courses in philosophy.

One of the following courses may, with the approval of the senior

instructor in Philosophy, be included in a Philosophy major: Psychology 211 or 412, History 211, Sociology 211, Humanities 421, or Political Science 431.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Political Science

The following courses, in an approved sequence, constitute a major in Political Science:

Political Science 211, 431, History 212 or 213; and three other full courses in Political Science.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Psychology

The following courses, in an approved sequence, constitute a major in Psychology: Psychology 211, 412, and four more full courses in Psychology. *One* of the following courses may, with the approval of the senior instructor in Psychology, be included in a Psychology major.

A course in Biology, a course in Sociology, Philosophy 211 or 221, a course in Education, Mathematics 241, or Fine Arts 461.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Sociology

The following courses, in an approved sequence, constitute a major in Sociology: Sociology 211 and two other full courses in Sociology; Psychology 211, 441; and one and one-half credits from Psychology 225, 459, Economics 271, Mathematics 241.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by the chairman of the department.

Major in Social Welfare

The following courses, in an approved sequence, constitute a major in Social Welfare:

1. At the introductory level: Economics 211, Political Science 211, Psychology 211, Sociology 211.
2. Two further courses in Sociology and two further courses in at least *one* of the other three fields named above.
3. Applied Social Science 461, 462, Mathematics 241.

No student will be accepted for the major until a plan of study over the several undergraduate years has been approved by Dr. H. F. Hall.

SPECIAL PROGRAMMES OF STUDY

Preparation for Entrance to Graduate Faculties and University Professional Schools

Students intending to transfer after graduation from Sir George Williams University to a university graduate faculty or professional school should consult the Registrar upon entrance to the University in order that their programmes of study may be planned to satisfy the entrance requirements of the university they expect later to attend, as well as the requirements for the degree or diploma they seek in the University.

It is generally recognized that the obtaining of a bachelor's degree does not necessarily imply the ability to do graduate work or research. However, students who, in the opinion of the Faculty, have exhibited during the period of their course those special abilities which are required in order to do successful university professional school work or research may be given a *Certificate of Recommendation to Graduate Faculties and University Professional Schools* upon application to the Faculty Council. Students who do not merit this Certificate will not be supported by Sir George Williams University in applying for admission to such professional schools or universities.

It is standard practice for university graduate schools to require of applicants not only a high standard of previous academic performance but an extended amount of undergraduate specialization or "majoring" in the specific subject in which the advanced degree is sought, sufficient to enable the student to commence immediately upon the graduate courses. Graduates of high standing in a general university course are therefore usually required to take additional work in their subject, sometimes to the extent of a "qualifying year", before proceeding to the work for higher degrees.

Y.M.C.A. Secretaryship Training

Young men and young women wishing to prepare themselves as Secretaries in the Canadian Y.M.C.A. may do so in the University by choosing for the Bachelor's degree the maximum possible number of courses in the Social Sciences Division and fulfilling the requirements as outlined in the "Curriculum for the Diploma in Association Science." Candidates should note that field work in a Y.M.C.A. during their academic activity is highly desirable as an experience complementary to the classroom phase of training. Suitable candidates will find such field work opportunities available under the Fellowship Training Plan of the Montreal Y.M.C.A. This plan also provides some remuneration to offset tutorial and living ex-

penses. Applicants for the Fellowship Training Plan are directed to the Metropolitan Office of the Montreal Y.M.C.A. Those who are interested in qualifying for the Y.M.C.A. Secretaryship are directed to the following publications in pamphlet form:

1. "Qualifications and Training for the Secretaryship of the Young Men's Christian Association."
2. "Basic Areas of Professional Competence in the Y.M.C.A. Secretaryship."

(These pamphlets may be obtained from the Personnel Offices of the Montreal Y.M.C.A. or the National Council of Y.M.C.A.'s of Canada, 88 Eglinton Ave., Toronto 12).

Preparation for Entrance to the Study of Medicine

Students preparing at Sir George Williams University for admission to the Faculty of Medicine of McGill University may take the B.A. or B.Sc. course, at least three years of either being required for admission, although the complete degree course is preferable and usually is insisted upon by the medical school.

Such students must be sure to include among their courses these four: Inorganic Chemistry—Chemistry 211. Organic Chemistry—Chemistry 221 or 421. General Biology—Biology 211 or 212, and 221 or 222. General Physics — Physics 211.

Students planning to study medicine at universities other than McGill should consult the Registrar of the University for information regarding required pre-medical courses.

Preparation for Entrance to the Study of Dentistry

Students preparing at Sir George Williams University for admission to the Faculty of Dentistry at McGill University may follow either the B.A. or B.Sc. course.

The minimum requirement for admission to the dental course is the satisfactory completion of two full years of study in a recognized University or Faculty of Arts and Science (or the equivalent thereof), including courses in the following subjects: English and Mathematics, one year of each; Physics, one year with laboratory work (Physics 211); Biology, one year of General Biology or Zoology with laboratory work (half year of Botany and half year of Zoology will be accepted, but not one year of Botany alone), (Biology 211 or 212, and 221 or 222); Chemistry, two full courses, including one full course of Organic Chemistry with laboratory work (Chemistry 211 and 221 or 421).

Students should clarify their eligibility early with the Licensing Board of the Province or State in which they intend to practice on graduation.

Preparation for the Study of Law

Students planning to enter the study of law should take the Arts degree and should note that Article 29, Section (i) of the Bylaws of the Bar of Quebec require proof that "a candidate has followed successfully a regular course in philosophy either before or after his admission to study law". Such students are advised, therefore, to include Philosophy 211, 221, 241, 451 among their course selections.

It should also be noted that an ability to read French easily is required for admission to the Faculty of Law at McGill University. For admission to the Faculty of Law at the University of Montreal, students require two years of university Latin and three years of Philosophy (including Logic and Ethics).

The degree of the University is approved for admission to the study of law at Osgoode Hall.

Preparation for Entrance to the Study of Theology

The following courses are recommended for students of Sir George Williams University who are preparing to enter the Faculty of Divinity of McGill University: Greek 211 and 212; Philosophy 411, 412, or 451; History 211; History 221 or 222; Psychology 211. Religion 211, 212, 241, and 242 may be included in the program. Consideration should be given to a major in Ancient Languages, English, History, or Philosophy.

Those planning to study at other institutions should consult them for particularls regarding requirements or desirable programs.

Teacher's Class I Diploma

Regulation 130 (c) and Regulation 133 of the Regulations of the Protestant Committee of the Council of Education of the Province of Quebec provide that those who hold an acceptable degree from an approved university may be admitted to a course of training leading to a Class I Certificate, or may be permitted to upgrade to Class I Diplomas if they already hold Class II or Class III Diplomas. The Protestant Central Board of Examiners has approved the Bachelors degrees in Arts, Science, and Commerce from Sir George Williams University for this purpose.

Regulation 130 (c) also provides that an acceptable degree must be either an honours degree or, alternatively, a general degree which includes courses as follows:

Courses of the First Year: English and four of the following: French, Geography, History, Mathematics, Latin, Biology, Botany, Zoology, Chemistry, Physics, another acceptable ancient or modern language.

Courses of the Second Year: Two courses continued from the First Year.

It is provided, however, that the Central Board of Examiners may at its discretion (a) admit any student whose courses approximate those detailed above, (b) admit students and prescribe the additional courses which they must complete.

Candidates should consult the Registrar with regard to the selection of their courses in the final two years to be sure that they obtain satisfactory training in the courses they will later normally be called upon to teach. Candidates should note that Mathematics 201, Latin 201, and English 201 will not be accepted as undergraduate credits when qualifying for the Class I Diploma.

For purposes of this diploma, Natural Science 210 may be treated as a first year course instead of Physics, Chemistry, or Biology; Natural Science 221 is accepted as a half-course in science; Natural Science 221 together with a half-course in Geography is accepted as a full second year course; Social Science 210 is accepted in place of Geography or History; Humanities 210 is accepted as a first year course in History; English 211 and English 221 are both needed to satisfy the requirements as a first year course in English.

Teacher's Class II Diploma

Class II Diplomas shall be granted to teachers holding Class III Diplomas provided they have passed in ten papers of the Grade XI examinations and have obtained either (a) the Senior High School Leaving Certificate with passes in five subjects or (b) certificates showing that they have passed the following courses at Sir George Williams University:

1. English 221, and a second year English.
2. One of Mathematics 211-221, French 211 or 212, Latin 211, Chemistry 211, Biology 211-221 or Biology 212-222, Physics 210 or 211, Natural Science 210.
3. Any two additional subjects at the first year level.

High School graduates who have passed ten papers of the Grade XI examinations may enter the Macdonald College Institute of Education in the one year course leading to the Class II Certificate if they have successfully completed the following courses:

1. English 211, 221.
2. Four of the following subjects: Natural Science 210; Biology 211-221 or 212-222; Chemistry 211; Physics 210 or 211; French 211 or 212; Geography (any number); German 211; History (any number); Latin 211, Mathematics 211-221; English 445.

Preparation for Social Work

Students preparing at Sir George Williams University for admission to Schools of Social Work are advised to follow the cur-

riculum leading to the degree of Bachelor of Arts. Such students are urged to take the maximum possible number of courses in the Social Sciences Division. Certain courses listed under the heading of "Applied Sociology" should be helpful in providing a broad general introduction to social work and the social service agencies. A mimeographed outline of a suggested under-graduate curriculum as preparation for graduate work or immediate employment in the social service field may be obtained from the Office of the Principal.

Membership in the Chemical Institute of Canada

The degree of Bachelor of Science with the major in chemistry that is offered by Sir George Williams University is approved as satisfying the requirements for admission to membership in the Chemical Institute of Canada under bylaws 6 and 7 of the Institute. Undergraduates, who have reached the age of seventeen, are eligible for election as *Student Members* if they are following the program leading to the degree and major mentioned on page 84. Graduates are eligible for election as *Junior Members* provided they are obtaining further training in approved graduate courses in Chemistry or Chemical Engineering or further professional experience approved by the Institute; upon completion of such training or experience, commencing not earlier than the first of January immediately following graduation, and provided that they have reached the age of twenty-one, they may be eligible for election as *Professional Members*. Further information may be obtained from the Registrar.

Chartered Accountants

Students holding the Bachelor of Commerce degree with a Major in Accountancy from Sir George Williams University at the time of registering with the Institute are usually exempted from the Intermediate examinations of the Institute of Chartered Accountants of Quebec, and from three of the five years of apprenticeship required for the C.A. certificate. Further information may be obtained from the Registrar.

Certified General Accountants

Students of the University may prepare for the examinations of the General Accountants Association which grants the title of C.G.A. (Certified General Accountant). This may be done by making an appropriate selection of unit courses, or by including the required courses in programmes leading to the diploma of Associate in Commerce or to the degree of Bachelor of Commerce. Students holding the Bachelor of Commerce degree from Sir George Williams University are now exempt from the first two years of the Association's examinations and from three of the five years of practical accounting

experience required. Those with Major in Accountancy are exempted from the first three years of the Association's examinations and from three of the five years of practical accounting experience required. Further information may be obtained from the Registrar.

The Chartered Institute of Secretaries

Students of the University may prepare for the examinations of The Chartered Institute of Secretaries which grants the professional certificate of "A.C.I.S." (Associate Chartered Institute of Secretaries). This may be done by making an appropriate selection of unit courses, or by including the required courses in programmes leading to the diploma of Associate in Commerce or to the degree of Bachelor of Commerce. Students holding the degree of Bachelor of Commerce from Sir George Williams University are now exempt from three of the intermediate examinations of the Chartered Institute of Secretaries, excluding the Secretarial Practice examination itself. Application for these exemptions must be made to the Secretary of the Institute. Further information may be obtained from the Registrar.

Registered Industrial and Cost Accountants

Students of the University may prepare for the examinations of the Society of Industrial and Cost Accountants which grants the professional certificate of "R.I.A." (Registered Industrial and Cost Accountant). This may be done by making an appropriate selection of unit courses, or by including the required courses available in programmes leading to the diploma of Associate in Commerce or the degree of Bachelor of Commerce. Students may complete the requirements for the R.I.A., except for Report Writing, Management Accounting and the Cost Accounting Thesis, at the same time as they complete the requirements of the B.Com. degree, by appropriate selection of unit courses. Only two years of service are required for those who have completed the requirements for the Bachelor of Commerce degree. Further information may be obtained from the Registrar.

Other Specially Planned Programmes

Students wishing a programme of study different from any of those suggested are invited to discuss their plans with an officer of the University. Students whose mother tongue is other than English particularly are urged to take advantage of the special arrangements which can be made to suit their needs.

Summary of Regulations

SUMMARY OF REGULATIONS

A brief summary of certain regulations is presented here for the guidance of students. A fuller statement of these regulations may be found elsewhere in the Announcement. Students should note that it is the policy of the University to consider individual circumstances in applying these regulations.

1. Residence Requirements

At least one full year at the University (including the final year) consisting of not less than five full courses. In the evening divisions these five courses must be taken over at least three four-month terms.

2. Attendance

Attendance requirements will vary from course to course, but attendance will be considered in assessing final grades. Students whose attendance is unsatisfactory may be refused credit for the course on the basis of examinations or assignments alone. In every case at least fifty per cent of the lectures in each term will be required.

3. Examinations

All students are expected to write the regular mid-term and final examinations. Absence from examinations is considered as failure except in the cases of certified illness.

4. Completion of Class Assignments

Students who fail to complete class assignments on time will be marked "incomplete". Grades of "incomplete" are considered as failures, and may be removed only by completing the required work not later than the following September, and paying the "late completion" fee.

5. Special Examinations

Normally, students will not be permitted to write examinations for courses for which they are not registered at the University. Under special circumstances, in order to validate certain courses for which proper certificates are not available students may be permitted, by approval of Faculty Council, to obtain credit for such courses upon the writing of a special examination.

6. Supplemental Examinations

a—Supplemental examinations are written during the special examination sessions in September, only.

b—Applications for supplemental examinations must be submitted *not later* than July 26th for the September examinations.

c—Applications and fees may not be transferred to a later examination period.

d—Supplemental examinations must be written not later than the following September.

e—Students may write only one supplemental examination in a subject without repeating the course.

f—Supplemental examinations will be graded only as "S" or "F".

7. Credits for Outside Courses (Advanced Standing)

a—In general, *pro tanto* credit will be given for courses of the Senior High School Leaving, or at other colleges and universities, on approval of the Registrar, provided they are equivalent to courses offered by the University.

b—Irrespective of the amount of credit given, the "B" course requirements, specific number of courses required in each faculty for the degree, and the residence requirements must be met. The University reserves the right to stipulate which courses in the first two years must be taken by students transferring in at an upper level. In no case will credit be given to students which would not be assigned to them in the university from which they have transferred.

c—Pro tanto credit will not usually be given for the pandemic courses.

d—Credit will not be given for courses taken outside the university while a student is registered at the university, unless permission has been obtained in advance from the Registrar. Nor may students register for courses at the university if they are enrolled, at the same time, for studies elsewhere.

8. Number of Courses permitted in Program

a—Day Division—For first year as indicated under Curricula for degrees. The remainder of the twenty-one courses will be taken over the three following years with not more than six courses in any one year.

b—Evening Division—a maximum of three full courses a year, except in Engineering.

9. Extra Courses

Superior students in the Day Division may be given permission to carry an extra course for credit in any year on written application to the Registrar, as long as the total number of courses for the year does not exceed six full courses.

10. Deficiencies

A student with a deficiency may make it up:—

a—by writing a supplemental examination.

b—by taking a summer course.

c—under exceptional circumstances, by taking an extra course during the regular session, by special permission on written application to the Faculty Council. (Students who have failed a year may not make up a deficiency by these means).

11. Eligibility for Summer Courses

The Summer Session is intended primarily as an aid to the Evening students, who are limited to eight hours a week in this session.

Day Division students may take summer courses only to make up a credit deficiency, unless the deficiency is due to a failed year.

12. Failures

Students securing "F" or equivalent grades in three or more full courses in any given year are required to repeat those subjects, if credit for them is to be secured, and may not write supplemental examinations in these courses. (Considered as failures are all "absences", "incompletes", and "R" grades). Such students may re-register for a subsequent session only with the special approval of the Registrar. After completion of his first five courses no student may take more than twenty-two courses to meet the requirements for a degree.

13. Reappraisal of Grades

Students wishing to have a paper re-read for purposes of raising an assigned grade, must make formal application to the Registrar, not later than one month after the receipt of the grade, and must pay a fee of $10.00 (refundable if the grade is raised.)

OUTLINES OF SUBJECTS

On the following pages are given brief outlines of the various courses of study offered in the University. These courses are offered in both Day and Evening Divisions. Students should consult the requirements of the Curricula (pages 79-85) before making their selections. *Each of these courses may be taken separately, as a unit course, by Partial Course Students in the Evening Division.*

The University reserves the right to alter without notice the content of any of the courses listed in the following pages, to change the schedule of courses offered, and to cancel any course for which there is insufficient registration.

A KEY TO COURSE NUMBERING IN THE ANNOUNCEMENT

The courses in the college curriculum, in Arts, Science, and Commerce, are divided into Categories A and B, and seven courses for each degree must be selected from Category B of the curriculum, (except in the cases of students majoring in one of the following: Accountancy, Business Administration, General Administration.)

Category A courses are numbered from 200 to 299.

Category B courses are numbered from 400 to 499.

The courses in the Engineering Division are numbered from 2000 to 5999.

REFERENCE INDEX TO OLD COURSE NUMBERS

(For your convenience courses are listed below according to the numbering system in effect up until June, 1958, with new course numbers shown in brackets).

NATURAL SCIENCES
Natural Science 101 (210)
Natural Science 102A (221)
Natural Science 102B (222)
Natural Science 103 (231)
Natural Science 104 (241)
Biology 101-1 (211)
Biology 101-2 (212)
Biology 101-3 (221)
Biology 101-4 (222)
Biology 102 (241)
Biology 103 (461)
Biology 104 (471)
Biology 105 (431)
Biology 106 (422)
Biology 107 (421)
Biology 108 (451)
Biology 109 (271)
Chemistry 102 (211)
Chemistry 103A (411)
Chemistry 103B (412)
Chemistry 104A (413)
Chemistry 105 (421)
Chemistry 106 (422)
Chemistry 107 (414)
Chemistry 108 (431)
Chemistry 109 (432)
Chemistry 110 (461)
Chemistry 111 (423)
Chemistry 112 (441)
Chemistry 113 (424)
Chemistry 114 (462)
Chemistry 115 (425)
Chemistry 116 (451)
Draughting 101 (211)
Draughting 102 (212)
Draughting 103 (411)
Mathematics 100 (201)
Mathematics 101-1 (211)
Mathematics 101-2 (221)
Mathematics 101-3 (212)
Mathematics 101-4 (222)
Mathematics 101-5 (231)
Mathematics 101-6
  (Commercial Mathematics 221)
Mathematics 102
  (Commercial Mathematics 231)

Mathematics 103 (241)
Mathematics 104 (431)
Mathematics 105 (451)
Mathematics 106 (461)
Mathematics 107 (455)
Mathematics 108 (453)
Mathematics 108A (454)
Mathematics 110 (462)
Mathematics 111 (same as Mathematics 451)
Mathematics 114 (463)

Physics 101 (211)
Physics 104 (441)
Physics 105 (451)
Physics 106 (221)
Physics 107 (231)
Physics 109 (461)
Physics 110 (453)
Physics 112 (471)

HUMANITIES
Humanities 101 (210)
Humanities 102 (421)
Humanities 103 (Religious Knowledge 231)

English 100 (201)
English 101 (211)
English 103 (445)
English 104 (435)
English 105 (432)
English 107 (434)
English 108 (253)
English 109 (244)
English 110 (241)
English 111 (464)
English 112 (419)
English 113 (471)
English 114 (242)
English 115 (243)
English 116 (221)
English 117 (254)
English 118 (433)
English 119 (214)
English 120 (215)
English 121 (465)
English 122 (436)
English 123 (216)

English 124 (455)
English 125 (463)
English 126 (261)
English 127 (262)
English 128 (454)
English 129 (461)
English 132 (472)

Fine Arts 101A (233)
Fine Arts 101B (234)
Fine Arts 102 (231)
Fine Arts 103A (211)
Fine Arts 103B (411)
Fine Arts 103C (412)
Fine Arts 104 (247)
Fine Arts 105 (252)
Fine Arts 106 (453)
Fine Arts 107 (232)
Fine Arts 108 (221)
Fine Arts 109A (241)
Fine Arts 109B (242)
Fine Arts 109C (243)
Fine Arts 110 (461)
Fine Arts 111 (251)
Fine Arts 112 (245)
Fine Arts 113 (244)
Fine Arts 114 (248)
Fine Arts 115 (246)

French 100 (201)
French 101A (211)
French 101B (212)
French 102 (213)
French 104 (231)
French 112 (422)
French 113 (423)
French 114 (421)
French 118 (424)
French 119 (425)

German 101 (211)
German 102 (212)

Greek 101 (211)
Greek 102 (212)
Greek 103 (421)
Greek 104 (422)

Hebrew 101 (211)
Hebrew 102 (212)
Hebrew 103 (421)

Journalism 101 (211)

Latin 100 (201)
Latin 101 (211)
Latin 102 (421)

Philosophy 101 (211)
Philosophy 102 (221)
Philosophy 103 (411)
Philosophy 104 (261)
Philosophy 105 (231)
Philosophy 106A (451)
Philosophy 106B (452)
Philosophy 107 (241)
Philosophy 107A (242)
Philosophy 108 (412)
Philosophy 109 (453)

Spanish 101 (211)
Spanish 102 (212)
Spanish 103 (213)
Spanish 105 (421)

SOCIAL SCIENCES

Social Science 101 (210)
Social Science 102 (251)

Economics 101 (211)
Economics 102 (221)
Economics 106 (261)
Economics 107 (271)
Economics 108 (251)
Economics 109 (421)
Economics 111 (411)
Economics 112 (441)
Economics 113 (442)
Economics 114 (481)
Economics 115 (482)
Economics 116 (443)
Economics 117 (222)
Economics 118 (422)
Economics 120 (223)

Education 101 (211)
Education 102 (221)
Education 103 (Religious
   Knowledge 221)
Education 104 (Religious
   Knowledge 222)
Education 105 (411)
Education 107 (231)

Geography 101 (211)
Geography 102 (251)

History 101 (211)
History 102 (212)
History 103 (213)
History 104 (413)
History 105 (452)
History 106 (451)
History 108 (432)
History 109 (222)

History 110 (221)
History 111 (441)
History 112 (231)
History 113 (461)
History 114 (462)
History 115A (471)
History 115B (472)

Political Science 101 (211)
Political Science 102 (421)
Political Science 103 (291)
Political Science 104 (441)
Political Science 105 (431)
Political Science 106 (251)
Political Science 107 (221)
Political Science 108 (411)
Political Science 109 (442)

Psychology 101 (211)
Psychology 102 (412)
Psychology 103 (427)
Psychology 104 (221)
Psychology 105 (223)
Psychology 106 (441)
Psychology 107 (451)
Psychology 108 (225)
Psychology 109A (461)
Psychology 109B (462)
Psychology 110 (231)

Sociology 102 (211)
Sociology 103 (221)
Sociology 104 (231)
Sociology 105 (422)
Sociology 106 (441)
Sociology 107 (442)
Sociology 108A (Applied
   Sociology 431)
Sociology 108B (Applied
   Sociology 221)
Sociology 108C (Applied
   Sociology 211)
Sociology 108D (Applied
   Sociology 231)
Sociology 108E (Applied
   Sociology 441)
Sociology 109 (232)
Sociology 110 (443)
Sociology 112 (423)
Sociology 113 (238)
Sociology 114 (251)

COMMERCE

Accountancy 101 (211)
Accountancy 102 (411)
Accountancy 103A (421)

Accountancy 103B (422)
Accountancy 104 (431)
Accountancy 105 (412)
Accountancy 106 (441)
Accountancy 107 (451)

Commerce 105 (Administration 211)
Commerce 106 (Commercial Law 211)
Commerce 107 (Marketing 221)
Commerce 109A (Marketing 251)
Commerce 109B (Marketing 252)
Commerce 110 (Marketing 211)
Commerce 111 (Marketing 222)
Commerce 113 (Commercial Law 431)
Commerce 114A (Finance 251)
Commerce 114B (Finance 252)
Commerce 115 (Finance 421)
Commerce 115A (Finance 422)
Commerce 116 (Finance 411)
Commerce 116A (Finance 412)
Commerce 117 (Insurance 211)
Commerce 118 (Administration 442)
Commerce 119 (Commercial Law 441)
Commerce 123 (Administration 221)
Commerce 124 (Communication 211)
Commerce 125 (Executive
   Training 211)
Commerce 126 (Industrial
   Relations 421)
Commerce 127 (Marketing 241)
Commerce 127A (Marketing 242)
Commerce 128 (Administration 431)
Commerce 129 (Administration 251)
Commerce 130 (Industrial
   Relations 411)
Commerce 131 (Industrial
   Relations 412)
Commerce 132 (Marketing 411)
Commerce 133 (Marketing 414)
Commerce 134 (Marketing 412)
Commerce 135 (Marketing 413)
Commerce 136 (Commercial Law 221)
Commerce 137 (Administration 441)

Executive Training 102 (Executive
   Training 421)
Executive Training 103 (Executive
   Training 422)
Executive Training 104 (Executive
   Training 431)
Executive Training 105 (Insurance
   212)

Mathematics 101-6 (Commercial
   Mathematics 221)
Mathematics 102 (Commercial
   Mathematics 231)

Natural Sciences Division
and Engineering

THE NATURAL SCIENCES DIVISION

Samuel Madras, *Senior Professor in the Natural Sciences Division.*

Note: Students requesting admission to advanced courses in Biology, Chemistry, Mathematics and Physics must have their courses approved by the professors concerned.

NATURAL SCIENCE

Henry Foss Hall, *Professor of Natural Science.*

Edward Russell Paterson, *Assistant Professor of Natural Science.*

500 - Natural Science 210.   General Course in the Natural Sciences

A pandemic course providing an introduction to the basic sciences necessary for an intelligent appreciation of the world of our day. Science is presented as a unity. The subject matter dealt with is: (a) the earth in space, the universe; the earth's crust, soil, minerals, rocks, strata, fossils; the nature of matter, radiation, etc. (b) animals and plants, their functions and relations; the human body; heredity and environment; evolution.   (Full course.)

500 - Natural Science 221.   Principles of Physical Geology

The course deals with the earth as a body; its structure; the changes taking place on its surface; and the forces producing these changes. It includes the principles of identification of rocks and minerals. It is not intended to equip those who may wish to undertake practical geological work, but offers a broad general basis for an intelligent interest in the physical aspects of the earth. Lectures are illustrated with lantern slides and specimens.   (Half course).

500 - Natural Science 222.   Principles of Historical Geology

Prerequisite: Natural Science 221. This is an advanced course in Geology, applying the principles of Physical Geology to a reconstruction of the history of the earth. The course provides a survey of the great changes that have taken place on the earth's surface throughout geological time. It explains the interpretation of evidence on which the history is based. It also gives a general picture (but not in detail) of the development of successive life forms as revealed by fossils. Illustrated with specimens and lantern slides.   (Half course.)

500 - Natural Science 231.   Descriptive Astronomy

The course deals in a descriptive way with the various celestial bodies and their relationships. Starting with the Solar System and continuing into Stellar and Galactic Astronomy, it offers the student the modern concept of the stellar universe as a whole. While it avoids mathematical treatment as much as possible, a background of some high school physics and mathematics is of advantage. Lectures are copiously illustrated with lantern slides.   The course is intended as a preparation for an intelligent amateur interest in this rapidly expanding science. (Full course.)

500 - Natural Science 241.   History of Science

This course deals with the origins of science and its development from primitive times to the 19th century. It explains the greatly differing attitudes of the past towards science by relating them to the characteristics of successive historical periods. Throughout the course science is treated as a unity, not subdivided into compartments. It is intended for students who have some background in one or more scientific fields, with the aim of clarifying their views of the significance of their particular interests in the broader conception of science as a whole. (Half course.)

BIOLOGY

James Murray Honeyman, *Professor of Biology, and Chairman of the Department.*
William F. Black, *Associate Professor of Biology.*
Donald L. Peets, *Associate Professor of Biology.*
Donald H. Steele, *Assistant Professor of Biology.*
Janet Melvin, *Senior Demonstrator in Botany.*
Malcolm Telford, *Senior Demonstrator in Zoology.*

501 - Biology 211.   The Evolution of Plants

A course on the nature and evolution of the plant world. The structure, physiology and reproductive processes of representative plants from the simplest to the most complex types are studied. The laboratory work is intended to acquaint the student with the variety of plant organisms and to illustrate botanical techniques. Lectures and laboratory. Students who have previously completed Biology 101A may not take this course for credit.   (Half course.)

501 - Biology 212.   The Flowering Plants

A review of the flowering plants including an account of their structure, physiology, reproduction, distribution and economic importance. In the laboratory the characteristic features of a variety of species of these plants are studied and botanical techniques illustrated. Lectures and laboratory.   (Half course.)

501 - Biology 221.   The Invertebrates

A course in general zoology using the invertebrates as illustrative material. The structure, physiology, reproduction, distribution and economic importance of these animals are considered. In the laboratory representative species are studied. Lectures and laboratory.   (Half course.)

NOTE: Students who have previously completed Biology 101B may not take this course for credit.

501 - Biology 222.   The Vertebrates

A course in general zoology using the vertebrates as illustrative material. The structure, physiology, reproduction and evolution of these animals are considered. In the laboratory representative species are dissected. Lectures and laboratory. (Half course.)

NOTE: Students who have previously completed Biology 101B or Biology 422 may not take this course for credit.

501 - Biology 241.   Genetics and Human Welfare

A course on the principles of heredity as understood by modern biology. It deals also with the application of genetic principles to organisms including man. The biological basis of social problems is dealt with at some length. The doctrine of organic evolution and its implications for human life and welfare are considered. This course may be taken for credit either as a Natural Science or as a Social Science. Lectures only.   (Full course.)

501 - Biology 271.   Histological Technique

A course in methods of preparing plant and animal tissues for microscopic study. Practical experience is acquired in fixing, embedding, cutting and staining. The techniques are useful to students intending scientific or technical work in biological or medical laboratories. A course mainly for majoring students. Owing to limitations of laboratory space, permission of instructor must be obtained before registering. Lectures and Laboratory. (Full course.)

501 - Biology 411.   Taxonomy of the Vascular Plants

Prerequisite: Biology 211 or 212. A survey of the classification, morphology, distribution and evolution of the flowering and cone-bearing plants and of the ferns. Local species as well as those of wider distribution are studied. Field work includes the preparation of a collection of plants by each student. Lectures and Laboratory.   (Full course.)

501 - Biology 421.   Invertebrate Zoology

Prerequisite: Biology 221. A course on the structure, taxonomy and development of the invertebrate animals. Emphasis is placed on species of economic importance. Biological phenomena such as regeneration and the parasitic mode of life are considered. In the laboratory representatives of the principal invertebrate phyla are dissected. Field work includes the preparation of a collection of animals by each student. Lectures and laboratory. (Full course.)

501 - Biology 422.   Chordate Anatomy

Prerequisite: Biology 222. The comparative anatomy of chordate animals, their reproduction, development, distribution and evolution. In the laboratory, representatives of the principal vertebrate classes are dissected. Lectures and laboratory. (Full course.)

501 - Biology 431.   General Physiology

Prerequisites: Biology 422; Chemistry 211, Physics 211. A course in functional biology. The principal physiological processes are studied with considerable emphasis on human physiology. In the laboratory these processes are investigated using the appropriate techniques. Lectures and laboratory. (Full course.)

501 - Biology 451.   Animal Ecology

Prerequisites: Biology both 221 and 222, and one of Biology 211, or 212. The natural history of animals. A study of the interrelations between animals, groups of animals, and their environments. Zoological geography; migrations and other movements of animals. Ecology and evolution. Lectures only. (Full course.)

501 - Biology 461.   Vertebrate Embryology

Prerequisite: Biology 422. A course to acquaint the student with the fundamental processes of growth and development in the vertebrates. A comparative study is made of selected vertebrate species and a survey of experimental procedures is included. In the laboratory appropriate illustrative material is studied. Lectures and laboratory. (Half course.)

501 - Biology 471.   Vertebrate Histology

Prerequisite: Biology 422. A study of the microscopic characteristics of tissues and organs. By means of lectures and laboratory work, the student will become familiar with the origin, the structure, and the organization of the cells comprising the various tissues of man. Lectures and laboratory. (Half course.)

501 - Biology 481.   History of Biology

Prerequisite: Biology 431. A course following the growth of biological science to the end of the nineteenth century. Lectures only. (Full course.)

501 - Biology 491.   Special Study

Prerequisite: Permission must be obtained from the Chairman of the Department. In this course the student undertakes a special project to develop his knowledge of scientific procedures as used by biologists. (Full course.)

Major in Biology

Attention is called to the statement on majors on pages 89-96.

Cognate Courses

Courses in related fields may be helpful or required for the student who plans a career in a branch of Biology. Among such courses are Chemistry 421 and 441, German 211 and Psychology 461 and 462.

CHEMISTRY

Samuel Madras, *Professor of Chemistry, and Chairman of the Department*
John Russell Ufford, *Associate Professor of Chemistry.*
Roger H. C. Verschingel, *Associate Professor of Chemistry.*
Jacques Lenoir, *Assistant Professor of Chemistry.*
Andrew D. Long, *Assistant Professor of Chemistry.*

503 - Chemistry 211.   General Inorganic Chemistry

This course is a prerequisite to all other courses in chemistry and is taken by students whether or not they have had previous courses in chemistry. A fundamental and historical development of the theory of inorganic chemistry is made, with mathematical treatment of equivalent, molecular and atomic weights, the laws of gases and solutions, and the principle of chemical equilibrium. The electron structure of matter is used as the unifying concept for valence, the periodic table, chemical combination and reaction. A descriptive study is made of colloids, metals and non-metals. Lectures and laboratory. (Full course.)

Textbook: Quagliano, *Chemistry.*

Laboratory Manual: Madras, Verschingel, *Laboratory Exercises in General Chemistry.*

503 - Chemistry 221.   Introductory Organic Chemistry

Prerequisite: Chemistry 211. This course covers the common aliphatic, aromatic, and heterocyclic series. The course stresses the application of organic chemistry to other fields such as biochemistry, biology and pharmacology. Lectures and laboratory. (Full course.)

NOTE: Credit will not be given for both Chemistry 221 and Chemistry 421. Chemistry 421 is prerequisite for certain advanced courses.

Textbook: Brewster and McEwen, *Organic Chemistry, a Brief Course.*

Laboratory Manual: To be announced.

503 - Chemistry 231.   Physical Chemistry

Prerequisites: Chemistry 211, Mathematics 221. Kinetic theory is applied to gases, critical phenomena, and solutions. A brief discussion of the liquid state and crystallography is included. Other topics discussed are electro-chemistry, atomic structure, and radioactivity. Lectures only. (Full course).

Textbooks: Madras, *An Outline of Physical Chemistry.*
Gladstone and Lewis, *Elements of Physical Chemistry.*

503 - Chemistry 411.   Inorganic Qualitative Analysis

Prerequisites: Chemistry 211, Mathematics 221. The subject matter of this course includes an advanced treatment of valence, ionization, acid-base theory, co-ordination theory, and redox equations. The Law of Chemical Equilibrium is applied to ionization, hydrolysis, precipitation, and complex ion formation. The laboratory work consists of the semi-micro analysis of cations and anions in a series of unknown solutions, simple salts and alloys, solid mixtures. Lectures and Laboratory. (Half course.)

Textbooks: Vogel, *Textbook of Macro and Semimicro Qualitative Inorganic Analysis.*
Moeller, *Qualitative Analysis.*

Reference: Curtman, *Introduction to Semimicro Qualitative Inorganic Analysis.*

503 - Chemistry 412.   Elementary Inorganic Quantitative Analysis

Prerequisite: Chemistry 411. This course deals with the fundamental principles of quantitative analysis including gravimetric, volumetric, and simple instrumental methods, use of the balance, apparatus, errors, etc. The lectures deal with neutrilization, oxidation-reduction, precipitation, and complex formation reactions. The laboratory work includes the standard methods of estimation of single constituents gravimetrically, and by simple instrumental volumetrically, techniques. Lectures and laboratory. (Half course.)

Textbook: Day and Underwood, *Quantitative Analysis.*

503 - Chemistry 413.   Advanced Inorganic Quantitative Analysis and Instrumental Analysis

Prerequisites: Chemistry 412, Physics 211. Chemistry 431L to be taken previously or concurrently. Discussion of instrumental methods involving neutralization, precipitation and oxidation-reduction reactions. Discussion of other instrumental methods such as colorimetry, spectrophotometry, nephelometry, voltametry, polarography and spectrography. The laboratory consists of practical applications of the instrumental methods discussed in the lectures. Students who have previously completed Chemistfy 104 may not take this course for credit. Lectures and laboratory. (Full course.)

Textbook: Ewing, *Instrumental Methods of Chemical Analysis.*
Laboratory Manual: Reilley and Sawyer, *Experiments for Instrumental Methods*

503 - Chemistry 415.   Inorganic Chemistry

Prerequisite: Chemistry 431L previously or concurrently. This course deals with the development of periodic classification. A thorough discussion of oxidation-reduction, the concept of electronegativity, crystal chemistry, non-aqueous solvents, radiochemistry and interstitial and non-stoichiometric compounds are also included. Lectures and laboratory. (Full course.)

503 - Chemistry 416.   Advanced Inorganic Chemistry

Prerequisites: Chemistry 415 and Mathematics 455. This is essentially a course in structural chemistry. It deals with the structure of atoms, molecules and metals. Also included are organo-metallic and coordination compounds. Lectures only. (Full course.)

503 - Chemistry 421.   Organic Chemistry

Prerequisite: Chemistry 211. This course covers the common aliphatic and aromatic series, determination of structure, isomerism, mechanisms of reactions. Students who have previously completed Chemistry 221 may not take this course for credit. Lectures and laboratory. (Full course.)

Textbook: Noller, *Textbook of Organic Chemistry.*
Reference: Fieser and Fieser, *Textbook of Organic Chemistry.*

503 - Chemistry 422.   Carbohydrates, Proteins, Amino-acids and Lipids

Prerequisite: Chemistry 221 or equivalent. This course covers the classification and structure of carbohydrates, amino-acids and lipids. Methods of synthesis, proofs of structure, and analytical methods are discussed. Some time is devoted to cellulose chemistry. Lectures only. (Half course.)

Reference: Gilman, *Organic Chemistry.*

503 - Chemistry 423.   Advanced Organic Chemistry

Prerequisites: Chemistry 421, and Chemistry 431L. This course deals with electronic theories of organic chemistry. A discussion of bond polarity, resonance, acid-base theory, and hydrogen bonding is used as a background for the study of the mechanisms of organic reactions. Lectures only. (Half course.)

Reference: Gould, *Mechanism and Structure in Organic Chemistry.*

503 - Chemistry 424.   Organic Analysis

Prerequisites: Chemistry 412 and Chemistry 421. Identification reactions and advanced techniques are studied for the analysis of simple compounds and mixtures. Quantitative analyses for elements and functional groups are included. Instrumental techniques such as ultraviolet and infrared spetrophotometry are used in the laboratory. Lectures and Laboratory. (Full course.)

Textbooks: Cheronis and Entrikin, *Semimicro Qualitative Organic Analysis, Systematic Identification of Organic Compounds.*
Wiberg, *Laboratory Technique in Organic Chemistry.*

503 - Chemistry 425.   Chemistry of High Polymers

Prerequisite: Chemistry 221 or equivalent. This course is intended to outline the fundamental characteristics of macromolecular substances, both natural and synthetic. A survey is made of the more significant polymers in the fields of plastics, resins, rubbers, carbohydrates, proteins, etc., and an attempt is made to correlate available knowledge about chain structure with the physical properties of the substances concerned. The two main types of polymerization reactions, addition and condensation, are discussed from the viewpoint of methods of polymerization and reaction mechanisms. Lectures only. (Half course.)

Textbook: to be announced.

503 - Chemistry 426.   The Chemistry of Heterocyclic Compounds

Prerequisite: Chemistry 424. This course deals with the preparation, reactions and properties of the usual heterocyclic compounds. The laboratory portion of the course deals with the synthesis of more complex organic compounds. Lectures and laboratory. (Half course.)

503 - Chemistry 431L.   Physical Chemistry Laboratory

Prerequisites: Chemistry 231 and Chemistry 412. Mathematics 451 must be taken previously or concurrently. Laboratory only.

Note: extra credit will not be given for this course, but students who take this in addition to Chemistry 231 will obtain credit for Chemistry 231 as a laboratory course at the "B" level.

Laboratory Manual: Daniels, et. al., *Experimental Physical Chemistry.*

503 - Chemistry 432.   Chemical Thermodynamics

Prerequisites: Chemistry 431L previously or concurrently, Mathematics 451. Development of the first two laws of thermodynamics serves as a basis for a more advanced treatment of gases, liquids, thermochemistry and electro-chemistry. A brief treatment of chemical kinetics, activation energy and photochemistry is given. Lectures only. (Full course.)

Textbooks: Madras, *An Outline of Phycisal Chemistry.*
Glasstone, *Thermodynamics for Chemists.*

503 - Chemistry 433.   Advanced Physical Chemistry

Prerequisite: Chemistry 432. This course deals with topics not discussed or only briefly discussed in Chemistry 231 and Chemistry 432. Lectures and laboratory. (Full course.)

503 - Chemistry 441.   Biochemistry

Prerequisites: Chemistry 221 or equivalent and any formal course in Biology. A study is made of carbohydrates, lipids, proteins, enzymes, and nucleic acids. The Metabolic pathways are presented with some reference to pathological conditions and detoxication mechanisms. Lectures and laboratory. (Full course.)

Textbook: White et al, *Principles of Biochemistry.*

Laboratory Manual: Harrow, et. al., *Laboratory Manual of Biochemistry.*

503 - Chemistry 461.   Industrial Inorganic Chemistry

Prerequisite: Chemistry 211. This course involves a study of industrial processes and practices pertaining to inorganic chemicals and products. The industries covered include those concerned with mineral acids, alkalies, synthetic ammonia, fertilizers, cements, ceramics, glass, electro-thermal products, electro-metallurgy and water treatment. This course is not applicable towards a major in chemistry. Lectures only. (Half course.)
Textbook: Shreve, *Chemical Process Industries.*

503 - Chemistry 462.   Industrial Organic Chemistry

Prerequisite: Chemistry 221. This course is similar in nature to Chemistry 461, but deals with the field of organic materials. Among the industries discussed are those concerned with organic synthesis, fermentation, coal and wood distillation, petroleum refining, oils and fats, pulp and paper, paints, resins and plastics, rubber, etc. This course is not applicable towards a major in chemistry. Lectures only. (Half course.)
Textbook: Shreve. *Chemical Process Industries.*
Reference: Groggins, *Unit Processes in Organic Chemistry.*

503 - Chemistry 490.   Application of Transducers to Chemical Measurements

Prerequisites: Mathematics 451, Chemistry 412, Chemistry 231. This course deals with the theory and operation of the instruments used extensively in the field of chemistry. It covers spectroscopy, pH meters, polarographs, titrimeters, recorders, etc. Lectures and laboratory. (Full course.)

Chemistry 3231.
Chemistry 3311. } See Engineering Division.
Chemistry 3312.
Chemistry 3321.

Major in Chemistry

Attention is called to the statement on majors on pages 89-96.

MATHEMATICS

Norman Edward Smith, *Professor of Mathematics, and Chairman of the Department.*
Frederick W. Bedford, *Associate Professor of Mathematics.*
Clifford Carroll Sparling, *Associate Professor of Mathematics.*
Edna Vowles, *Associate Professor of Mathematics.*
Martin Harrow, *Assistant Professor of Mathematics.*
John Senez, *Assistant Professor of Mathematics.*
Jean C. Turgeon, *Assistant Professor of Mathematics.*
Victor Byers, *Lecturer in Mathematics.*
Mary A. McIlwraith, *Lecturer in Mathematics.*

502 - Mathematics 201.   Elements of Mathematics

This course is offered for students who have not had the usual pre-university training in mathematics. Subject matter: Elementary algebra up to and including simultaneous quadratic equations, and indices; certain theorems and problems in plane geometry. Students who have received credit towards their admission for High School Mathematics will not receive credit for this course. Students may have the option of taking an extra tutorial period, and may be required to do so at the instructor's discretion. (This course, when taken, will not satisfy the requirements in Mathematics for the diploma of Associate in Science or Commerce, or the degree of Bachelor of Science, but may be credited as an option in the Natural Sciences Division.) (Full course.)

502 - Mathematics 211.   Trigonometry

No student who has passed high school trigonometry with 65% or more may register for this course. Subject matter: definition of trigonometric functions, identities and trigonometric reduction, radian measure, functions of multiple angles, transformation of products and sums of functions, solution of triangles by logarithms, solution of trigonometric equations, inverse functions, graphs. Tutorial: students may be required to take supervised practice in the solution of problems in trigonometry. (Half course.)

502 - Mathematics 221.   Algebra

No student who has passed intermediate algebra with 65% or more may register for this course. Subject matter: ratios proportion, variation, arithmetic progressions, geometric progressions, harmonic progressions, theory of equations, permutations and combinations, binomial theorem, mathematical induction, and inequalities. Tutorial: students may be required to take supervised practice in the solution of problems in algebra. (Half course.)
Note: Students having completed High School Trigonometry and Intermediate Algebra with 65% or more, may register in special sections of Mathematics 231 and 451 concurrently.

502 - Mathematics 231.   Analytic Geometry

This course is compulsory for first year science students. Subject matter: Points, distances, areas of polygons, straight line equations. Circle equations, tangents to the circle, parabola equations. (Half course.)

502 - Mathematics 241.   Statistical and Graphical Methods

This course provides the elementary principles of statistical method as applied in the scientific study and interpretation of economic and social phenomena. The course includes the collection of statistical data; various methods of presentation including tables and graphs; the frequency distribution and its mathematical analysis including averages, measures of dispersion, measures of skewness; normal curve; and correlation. This course is suitable for students in Commerce, Psychology and Sociology and also for those who plan to enter the fields of Social Work or Education. Economics 481 is recommended as a sequel to this course. NOTE: Credits will not be given for *both* Mathematics 241 and 103A. (Half course.)

502 - Mathematics 431.   Analytic Geometry

Prerequisites: Mathematics 211, 221, 231; and 451 previously or concurrently. Subject matter: parabola, ellipse, hyperbola, translation and rotation of axes, polar co-ordinates, curve-tracing, determinants, and vectors. Solid analytic geometry; lines planes, surfaces, spherical and cylindrical co-ordinates. (Full course.)

502 - Mathematics 441.   Mathematical Statistics

Prerequisite: Mathematics 451. The subject matter of this course includes probability, empirical frequency distributions of one variable, theoretical frequency distributions of one variable, elementary sampling theory for one variable, correlation and regression, theoretical frequency distributions for correlation and regression, testing goodness of fit, general principles for testing hypothesis and for estimation, small sample distribution, analysis of variance, statistical design in experiments, non-parametric methods. (Full course.)

502 - Mathematics 451.   Calculus

Prerequisites: Mathematics 211, 221, and 231. NOTE: Credits will not be given for *both* Mathematics 451 and 111. Subject matter: Constants, variables, definition of a continuous function; limits; the derivation of algebraic functions; differentiation of exponential, logarithmic, and transcendental functions; inverse trigonometric and hyperbolic functions; application of derivatives to physical problems, partial differentiation, integration, application of integration to areas, volumes and lengths of plane curves; applications to problems of physics.   (Full course.)

502 - Mathematics 453.   Advanced Calculus

Prerequisites: Mathematics 431 and 451. Subject matter: discontinuities, mean value theorems, limits and indeterminate forms, partial differentiation and applications, multiple integrals, infinite series, expansion of functions.   (Half course.)

502 - Mathematics 454.   Advanced Calculus

Prerequisites: Mathematics 451 and 431 and 453. Subject matter: line integrals, improper integrals, gamma and beta functions, maximum and minimum in several variables, Fourier series, introduction to complex analysis, introduction to calculus of variation.   (Half course.)

502 - Mathematics 455.   Differential Equations

Prerequisite: Mathematics 451. Mathematics 431 must be taken previously or concurrently. Recognition and solution of equations of first order, homogeneous, linear, exact, etc. Second and higher order equations. Simultaneous equations, solution by series. Applications. (Half course.)

502 - Mathematics 456.   Differential Equations

Prerequisite: Mathematics 455. A continuation of Mathematics 455 including introduction to partial differential equations, with further applications.   (Half course.)

502 - Mathematics 461.   Advanced Algebra and Real Variable Theory

Prerequisites: Mathematics 431 and 451. Subject matter: complex numbers, determinants, rank of matrix, theory of equations, limits, continuity, Riemann integration improper integrals, mean value theorems, numerical methods, functions of several variables, sequences, series.   (Full course.)

502 - Mathematics 462.   Theory of Functions of a Complex Variable

Prerequisite: Mathematics 461. Subject matter: elementary functions, Cauchy-Riemann equations, integration, Cauchy's integral theorem, Taylor's and Laurent's theorems, calculus of residues, analytic continuation, conformal mapping.   (Full course.)

502 - Mathematics 463.   Introduction to Modern Algebra

Subject matter: integral domains, rings, fields, groups, vector spaces, matrices. (Full course.)

Mathematics 2213.
Mathematics 2223.
Mathematics 2224.
Mathematics 2231.
Mathematics 2251. } See Engineering Division.
Mathematics 2353.
Mathematics 2355.
Mathematics 2356.
Mathematics 2357.

Major in Mathematics and Physics

Attention is called to the statement on majors on pages 89-96.

PHYSICS

Walter Rudolf Raudorf, *Professor of Physics, and Chairman of the Department.*
Jean-Pierre Petolas, *Associate Professor of Physics.*
Ludwig Paul Lange, *Assistant Professor of Physics.*
Francisco Tomas, *Curator in Physics.*

504 - Physics 210.   Great Discoveries in Modern Physics

This course is intended primarily for Arts students. It traces the fundamental ideas of modern physics and their historical development by a descriptive and reflective study of the most telling discoveries in modern physics. Lectures only. (Full course.)

Note: This course may not be taken for credit after Physics 211.

References: Gamow & Cleveland, *Physics, Foundations and Frontiers;*
M. H. Shamos, *Great Experiments in Physics;*
A. Beiser, *The World of Physics.*

504 - Physics 211.   General Physics (Introductory)

Elements of mechanics, sound, heat, magnetism, electricity, and light. A descriptive approach using only elementary mathematical methods. This course may be taken by students having no previous knowledge of Physics. Mathematics 211 and 221 or 212 and 222 must be taken previously or concurrently. Lectures and Laboratory.   (Full course.)

References: Smith and Cooper, *Elements of Physics;*
Sears and Zemansky, *College Physics;*
Weber, White and Manning, *Physics for Science and Engineering.*

504 - Physics 222.   Sound and Light

Prerequisites: Physics 211 and Mathematics 451 previously or concurrently. Simple harmonic motion, waves, Huygen's principle, interference and diffraction of sound and light, acoustics, lenses and mirrors, illumination, polarization, origin of spectra.   Lectures and laboratory.   (Half course.)

References: Marshall and Pounder, *Physics;*
Robertson, *Introduction to Physical Optics;*
Jenkins and White, *Principles of Optics;*
Sears, *Optics.*

504 - Physics 232.   Heat

Prerequisities: Physics 211, and Mathematics 451 previously or concurrently. Temperature, thermal properties of matter, gas laws, kinetic theory, the laws of thermodynamics, heat engines, heat transfer. Lectures and laboratory. (Half course.)
References: Marshall and Pounder, *Physics;*
Zemansky, *Heat and Thermodynamics;*
Weber, *Heat and Temperature Measurement.*

504 - Physics 440.   Mechanics

Prerequisities: Physics 211, and Mathematics 451 previously or concurrently. Methods of plane kinematics, Statics and Dynamics; Elements of Elasticity and Fluid Mechanics. Lectures and laboratory. (Half course.)
References: Duncan & Starling, *Mechanics;*
Sears, *Mechanics, Wave Motion and Heat;*
Van Name, *Analytical Mechanics.*

504 - Physics 441.   Statics and Dynamics

Prerequisites: Physics 211, Physics 440, Mathematics 451. Analytic and vector mechanics of particles and rigid bodies, gyroscopic motion, Lagrange's equations, Hamilton's principle, some non-holonomic systems, relativity. Lectures only. (Full course.)
References: Synge and Griffith, *Principles of Mechanics, 3rd ed;*
Slater and Frank, *Mechanics;*
Lamb, *Statics and Dynamics.*

504 - Physics 451.   Advanced Electricity and Magnetism

Prerequisites: Physics 211, Physics 452, Mathematics 451. This course is intended chiefly for students majoring in Mathematics and Physics. It is a continuation of Physics 452 with emphasis on the application of Maxwell's Equations, circuit concepts, transmission lines, radiation, and wave propogation. Lectures only. (Full course.)
References: Peck, *Electricity and Magnetism;*
Slater and Frank, *Electromagnetism.*

504 - Physics 452.   Electricity and Magnetism

Prerequisites: Physics 211 and Mathematics 451. Analysis of direct-current circuits; steady-state magnetism; chemical and thermal effects of a current; electrostatic problems; charged particles in electric and magnetic fields; electromagnetic induction; transient currents; analysis of alternating current circuits; transformers; basic electronics. Lectures and Laboratory. (Full course.)
References: Duckworth, *Electricity and Magnetism;*
Sears, *Electricity and Magnetism;*
Page and Adams, *Principles of Electricity, 3rd ed.;*
Winch, *Electricity and Magnetism.*

504 - Physics 453.   Electronics

Prerequisite: Physics 452 or equivalent. Basic electron physics, theory and application of electronic devices, analysis of electron tube circuits. The lecture topics include amplifiers, oscillators, rectifiers, relaxation oscillators, sweep generators, pulse techniques, differentiating, integrating and scaling circuits, modulation and detection, electronic instruments, transistors. Lectures and Laboratory. (Full course.)
References: Seely, *Electron-tube Circuits;*
Millman and Seely, *Electronics;*
Albert, *Electronics and Electron Devices;*

504 - Physics 461.   Atomic Physics

Prerequisites: Physics 211 and Mathematics 451. Elementary particles, structure of the atom, X-rays, Compton effect, photo-electric effect, Bohr's theory of atomic spectra, De Broglie waves, Schrodinger's equation, radioactivity, nuclear physics, atomic energy, cosmic rays. Lectures and Laboratory. (Full course.)
References: Blackwood-Osgood-Ruark, *An Outline of Atomic Physics;*
Hoag and Korff, *Electron and Nuclear Physics;*
Rusk, *Introduction to Atomic and Nuclear Physics.*

504 - Physics 471.   Methods of Theoretical Physics

Prerequisites: Physics 441, 451, Mathematics 453 and 455 previously or concurrently. Application of differential equations, Fourier transforms, Vector and Tensor analysis to problems in Physics. Lectures only. (Full course.)
References: W. V. Houston, *Principles of Mathematical Physics;*
A. J. McConnell, *Applications of Tensor Analysis.*
Morse and Feshbach, *Methods of Theoretical Physics;*
L. P. Smith, *Mathematical Methods of Scientists and Engineers.*

504 - Physics 472.   Introductory Quantum Mechanics

Prerequisites: Physics 461; Mathematics 461 and 462 previously or concurrently. This course is for the student interested in theoretical physics who wishes to become familiar with the physical ideas and mathematical methods of quantum mechanics either because of their own intrinsic interest or in preparation for a comprehensive and critical survey of the theory, or for a study of its applications. Lectures only. (Full course.)

Physics 221.   Light

Physical and geometrical optics, interference, diffraction, polarization, simple spectrum analysis. Prerequisites: Physics 211 and Mathematics 451 previously or concurrently. Lectures and Laboratory. (Half course.)
References: Robertson, *Introduction to Physical Optics;*
Jenkins and White, *Principles of Optics;*
Sears, *Optics.*
This course is no longer offered.

Physics 231.   Heat and Thermodynamics

Thermometry, calorimetry, heat transfer, thermodynamic systems, the laws of thermodynamics, Carnot's Cycle, entropy, change of phase, elementary kinetic theory. Prerequisites: Physics 211 and Mathematics 451 previously or concurrently. Lectures and Laboratory. (Half course.)
References: Zemansky, *Heat and Thermodynamics;*
Weber, *Heat and Temperature Measurement.*
This course is no longer offered.

Physics 4222.
Physics 4232.
Physics 4352. } See Engineering.
Physics 4354.
Physics 4362.

Major in Mathematics and Physics

Attention is called to the statement on majors on pages 89-96.

ENGINEERING

Jack Bordan, *Professor of Engineering, and Chairman of the Department.*
Carl Goldman, *Assistant Professor of Engineering.*
Muhammad Iqbal, *Assistant Professor of Engineering.*

CHEMISTRY

903 - Chemistry 3231.   Physical Chemistry

The gaseous and liquid states of matter; thermochemistry; thermodynamics; properties of solutions; chemical equilibria; phase equilibria; chemical kinetics; conductance and electromotive force; applications to engineering.

Lectures:	2 hours per week, 2 terms.
Problem period:	1 hour per week, 2 terms.
Text:	Glasstone, *Elements of Physical Chemistry.*

903 - Chemistry 3311.   Inorganic Chemistry

The subject matter of this course includes an advanced treatment of valance, ionization, acid-base theory, co-ordination theory, and redox equations. The Law of Chemical Equilibrium is applied to ionization, hydrolysis, precipitation, and complex ion formation. The laboratory work consists of the semi-micro analysis of cations and anions in a series of unknown solutions, simple salts and alloys, solid mixtures.

Lectures:	2 to 3 hours per week, 1 term.
Laboratory:	8 hours per week, 1 term.
Text:	Vogel, *Textbook of Marco and Semi-micro Qualitative Inorganic Analysis.*
	Moeller, *Qualitative Analysis.*
Reference:	Curtman, *Introduction to Semi-micro Qualitative Inorganic Analysis.*

903 - Chemistry 3312.   Inorganic Quantitative Analysis

This course deals with the fundamental principles of quantitative analysis including gravimetric, volumetric, simple instrumental methods, use of the balance, apparatus, errors, etc. The lectures deal with neutralization, oxidation-reduction, precipitation, and complex formation reactions. The laboratory work includes the standard methods of estimation of single constituents gravimetrically, volumetrically, and by simple instrumental techniques.

Lectures:	2 to 3 hours per week, 1 term.
Laboratory:	8 hours per week, 1 term.
Text:	Day and Underwood, *Quantitative Analysis.*

903 - Chemistry 3321.   Organic Chemistry

This course covers the common aliphatic and aromatic series, determination of structure, isomerism, mechanisms of reactions.

Lectures:	2 to 3 hours per week, 2 terms.
Laboratory:	4 hours per week, 2 terms.
Text:	Noller, *Textbook of Organic Chemistry.*
Reference:	Fieser and Fieser, *Textbook of Organic Chemistry.*

ENGINEERING

905 - Engineering 5211.   Mechanical Drawing

Draughting techniques in pencil and ink; use of instruments; lettering; dimensioning; conventions; sketching. In conjunction with Engineering 5213, orthographic projection; sections; auxiliary views; common machine elements. Elementary design calculation for rivetted and welded joints, keys, thin cylinders and shells, spur gears, belt drives.

Lecture and Draughting Room:	4 hours per week, 2 terms.
Text:	French and Vierck, *Engineering Drawing.*
	Phelan, *Fundamentals of Mechanical Design.*
Reference:	Vallance and Doughtie, *Design of Machine Members.*

905 - Engineering 5213.   Descriptive Geometry

In conjunction with Engineering 5211, orthographic projection; solution of problems involving points, lines, planes, solids; auxiliary views; revolution; sections and developments; practical examples from various fields.

Lecture and Draughting Room:	2 hours per week, 2 terms.
Text:	Wellman, *Technical Descriptive Geometry.*

905 - Engineering 5221.   Engineering Problems

Included in Engineering 5241 conference.

905 - Engineering 5241.   Mechanics

Statics; analysis of simple structures by analytical and graphical techniques; friction, particle dynamics.

Lectures:	2 hours per week, 2 terms.
Conference:	1 hour per week, 2 terms.
Draughting Room:	As required.
Text:	Higdon and Stiles, *Engineering Mechanics.*

905 - Engineering 5271.   Surveying

Types of surveys; description and use of level, compass, transit, chain and tape; levelling; traverses, stadia; the circular curve.

Lectures:	2 hours per week, 1 term.
Text:	Breed and Bone, *Surveying.*

905 - Engineering 5272.   Surveying Summer School

Field work in surveying and mapping.
4 weeks in residence.

905 - Engineering 5273.   Surveying Summer School

First half of Engineering 5272.
2 weeks in residence.

905 - Engineering 5274.   Surveying Summer School

Second half of Engineering 5272.
2 weeks in residence.

905 - Engineering 5311.   Engineering Drawing

Structural. For students in Civil Option. Introduction to layout and detail drawings for structures in steel, timber and reinforced concrete.

Lecture and
Draughting Room: 2 hours per week, 2 terms.
References: American Institute of Steel Construction, *Structural Shop Drafting;*
French and Vierck, *Engineering Drawing;*
American Concrete Institute, *Manual of Standard Practice for Detailing Reinforced Concrete;*
Ramsey and Sleeper, *Architectural Graphic Standards.*

Mechanical: Continuation of Engineering 5211 design problems for students in Mechanical option. Design of machine members; bending and torsion, springs, surface and roller bearings, brakes and clutches. Detailed and assembly drawings of projects including design briefs. Production processes.

Lectures and
Draughting Room: 2 hours per week, 2 terms.
Text: Vallance and Doughtie, *Design of Machine Members.*
Reference: Faires, *Design of Machine Elements.*
any hand book in Mechanical Engineering Design.

905 - Engineering 5321.   Materials of Engineering

Manufacture, properties and uses of common engineering materials and their testing methods.

Lectures: 2 hours per week, 1 term.
Text: Moore and Moore, *Materials of Engineering.*

905 - Engineering 5322.   Technical Report

Each Engineering student must submit a technical report on entering Engineering III. This essay should be from 2,000 to 5,000 words in length, on a topic drawn from the engineering experience of the student during his summer work, or in the case of an evening student, from his full-time employment.

If a suitable topic based on personal experience cannot be found, the student may apply to the chairman of the Department of Engineering for permission to write on a topic connected with engineering, scientific, or industrial work. The letter of permission must accompany the essay.

The essay must be completely documented and illustrated, must be type-written on one side only of 8½ x 11 inch white paper of good quality, and must be suitably bound. A series of lectures will be given in Engineering II in preparation for writing of the essay.

905 - Engineering 5323.   Geology

Elements of mineralogy, petrology, structural geology, historical geology, physiography. Emphasis is laid on the relationship of geology to engineering practice.

Lectures: 2 hours per week, 2 terms.
Laboratory: 2 hours per week, 2 terms. Field trips to points of interest in and near Montreal.
Text: Trefethen, *Geology for Engineers.*

905 - Engineering 5324.   Engineering Problems

Problems in engineering for students in the Mechanical option.
Conference and Problem Periods: 2 hours per week, 2 terms.

905 - Engineering 5325.   Physical Metallurgy

Metallic deformation and annealing. Alloys, ferrous and non-ferrous. Heat treatment.

Lectures: 1 hour per week, 1 term.
Laboratory: 2 hours per week, 2 terms.
Text: Rollason, *Metallurgy for Engineers.*

905 - Engineering 5341.   Mechanics

The mechanics of systems of particles and rigid bodies; variable rectilinear and curvilinear motion; relative motion with respect to translating and rotating axes; vibration; gyroscopic motion; fluid mechanics. Vector calculus used freely.

Lectures: 2 hours per week, 2 terms.
References: Higdon and Stiles, *Engineering Mechanics;*
Langhaar and Boresi, *Engineering Mechanics;*
Shames, *Engineering Mechanics.*

905 - Engineering 5342.   Mechanics of Machines

Instant centres, velocity and acceleration diagrams; design of simple mechanisms, cams, involute gear teeth; gear trains; belts.

Lectures and
Draughting Room: 2 hours per week, 2 terms.
References: Hinkle, *Kinematics of Machines;*
Shigley, *Kinematic Analysis of Mechanisms.*

905 - Engineering 5343.   Strength of Materials

Stress, strain, elasticity of materials; shear and bending moment diagrams; beams and columns; torsion and bending in shafts and springs.

Lectures: 2 hours per week, 2 terms.
Laboratory: 3 hours per week, 1 term.
References: Popov, *Mechanics of Materials.*
Timoshenko and MacCullough, *Elements of Strength of Materials.*

905 - Engineering 5351.   Circuit Analysis

Response of circuit elements to steady and time-varying currents; phasor algebra; locus diagrams; network theorems; Fourier series.

Lectures: 2 hours per week, 2 terms.
Problems
and laboratory: 3 hours per week, 2 terms.
References: Skilling, *Electrical Engineering Circuits.*
Fich and Potter, *Theory of AC Circuits.*

905 - Engineering 5352.   Circuit Analysis

Introductory course in circuit theory for non electrical engineering students.

Lectures: 2 hours per week, 1 term.
Laboratory: 3 hours per week, 1 term.
Text: To be announced.

905 - Engineering 5363.   Chemical Engineering Problems

Energy and material balances; properties of gases and gaseous mixtures; humidity; heats of reaction and combustion; gas analysis; hydrostatics; elementary fluid flow.

Conference: 1 hour per week, 2 terms.
Problem Period: Hours to be arranged.

905 - Engineering 5371.   Surveying

Adjustment of level and transit; circular, vertical and spiral curves; polar planimeter; areas; land partition; chaining errors and corrections; earthwork calculations.

    Lectures: 2 hours per week, 1 term.
    Problem Period: See 5372.
    References: Breed & Bone, *Surveying*.
                  Davis & Foote, *Surveying*.

905 - Engineering 5372.   Surveying Problems

A course, complementary to 5371 for students in Civil option.

    Problem Period: 3 hours per week, 1 term.

905 - Engineering 5381.   Mechanical Engineering

Thermodynamics, steam properties, combustion, steam power plants, gas cycles, compressors, refrigeration, I-C engines, turbo-machinery, heat transfer, fluid dynamics.

    Lectures: 2 hours per week, 2 terms.
    Laboratory: 3 hours per week, 2 terms.
    Text: Dillio & Nye, *Thermal Engineering*.

MATHEMATICS

902 - Mathematics 2224.   Algebra and Spherical Trigonometry

Determinants; theory of equations; complex numbers, spherical triangles and applications.

    Lectures: 2 hours per week, 1 term.
    Text: Brink, *Spherical Trigonometry*.
            Peterson, *College Algebra*.

902 - Mathematics 2231.   Analytic Geometry

Conic sections; polar coordinates; parametric representation; curve tracing; elementary solid geometry; simple statistical measures; curve fitting.

    Lectures: 2 hours per week, 2 terms.
    Problem Period: 1 hour per week, 1 term.
    Text: Middlemiss, *Analytic Geometry*.

902 - Mathematics 2251.   Calculus

Limits; differentiation of the elementary functions with applications to maxima and minima, time-rates, errors and approximations; elementary integration with applications to areas, volumes, arc length, moments, etc.

    Lectures: 2 hours per week, 2 terms.
    Problem Period: 1 hour per week, 1 term.
    Text: Thomas, *Calculus and Analytic Geometry*.

902 - Mathematics 2353.   Calculus

Partial differentiation; multiple integrals; infinite series; vectors.

    Lectures: 2 hours per week, 2 terms.
    Text: Thomas, *Calculus and Analytic Geometry*.

902 - Mathematics 2357.   Differential Equations

Recognition and solution of equations of first order, homogeneous, linear, exact, etc.; second and higher order equations, solution by series; partial differential equations; applications.

    Lectures: 2 hours per week, 2 terms.
    Text: Reddick and Kibbey, *Differential Equations*.

902 - Mathematics 2213.   Mensuration and Spherical Trigonometry

Mensuration of the simpler rectilinear solids, cylinders, cones, and spheres; solution of spherical triangles.

This course is no longer offered. See Mathematics 2224.

902 - Mathematics 2223.   Algebra

Complex numbers; determinants; remainder theorem; partial fractions; Horner's method; interest and annuities.

This course is no longer offered. See Mathematics 2224.

902 - Mathematics 2355.   Differential Equations

Recognition and solution of equations of first order, homogeneous, linear, exact, etc. Second and higher order equations. Simultaneous equations, solution by series. Applications.

This course is no longer offered. See Mathematics 2357.

902 - Mathematics 2356.   Differential Equations

A continuation of Mathematics 2355 including introduction to partial differential equations with further applications.

This course is no longer offered. See Mathematics 2357.

PHYSICS

904 - Physics 4222.   Sound and Light

Simple harmonic motion using methods of calculus; waves; Huygen's principle, interference and diffraction of sound and light; acoustics; lenses and mirrors; aberrations; the eye; illumination; polarization; origin of spectra.

    Lectures: 2 hours per week, 1 term.
    Problem Period: 1 hour per week, 1 term.
    Laboratory: 2 hours per week, 1 term.
    Text: Marshall and Pounder, *Physics*.

904 - Physics 4232.   Heat

Temperature; thermal properties of matter; gas laws; kinetic theory; first and second laws of thermodynamics; heat engines; heat transfer.

    Lectures: 2 hours per week, 1 term.
    Problem Period: 1 hour per week, 1 term.
    Laboratory: 2 hours per week, 1 term.
    Text: Marshall and Pounder, *Physics*.

904 - Physics 4352.   Electricity and Magnetism

See Physics 452, page 122.

904 - Physics 4354.   Electricity and Magnetism

Analysis of direct-current circuits; steady-state magnetism; chemical and thermal effects of a current; electrostatic problems; charged particles in electric and magnetic fields.

    Lectures: 2 hours per week, 1 term.
    Laboratory: 2 hours per week, 1 term.
    Text: Duckworth, *Electricity and Magnetism*.

904 - Physics 4362.   Modern Physics

An introductory course in atomic, solid-state, and nuclear physics, for Electrical engineers.

    Lectures: 2 hours per week, 1 term.
    Laboratory: Selected experiments.
    Text: Sproull, *Modern Physics*.

Humanities Division

THE HUMANITIES DIVISION

William R. Fraser, *Senior Professor in the Humanities Division.*

HUMANITIES

Rachel Wasserman, *Professor of Humanities.*

600 - Humanities 210. General Course in the Humanities

It is the purpose of this course to enlarge and enrich the student's comprehension of his cultural heritage by the study of Man as a unique creative being. The sources for this study of man are drawn primarily from the fields of history, philosophy, religion, literature and the arts with a view toward examining those experiences and ideas of enduring power which have shaped the nature of the modern man from the age of Greece to the present century. (Full course.)

600 - Humanities 421. Twentieth Century Humanism

Prerequisite: Philosophy 211 or 221, and other approved courses. Modern authors and philosophers are studied and discussed in an attempt to discover the trend of humanistic thinking in the present century. Particular emphasis is placed on global thinking, the effect of modern conditions on contemporary thought. (Full course.)

ENGLISH

Neil Compton, *Professor of English, and Chairman of the Department.*
Douglass Burns Clarke, *Professor of English and Fine Arts*
Wynne Francis, *Associate Professor of English.*
Sidney Stevens Lamb, *Associate Professor of English.*
Rytsa Tobias, *Associate Professor of English.*
Roslyn Belkin, *Assistant Professor of English.*
Lorna Elizabeth MacLean, *Assistant Professor of English.*
Richard J. Sommer, *Assistant Professor of English.*
Michael Brian, *Lecturer in English.*
Mervin Butovsky, *Lecturer in English.*

601 - English 201. English Language

This course is designed for students who have completed secondary school or the equivalent in a language other than English and for whom, therefore, English is a secondary tongue. NOTE: Students who have previously received credit for English 211 may not take English 201 for credit. (Full course.)

601 - English 211. College Composition

This course encourages the development, through practice in the skills of writing, of an effective prose style, to enable the student to work effectively at the college level and beyond. (Full course.)

601 - English 212. Advanced Composition

Prerequisite: English 211. English 212 is offered for those students who wish to continue in a writing course in order to gain greater effectiveness in composition for general purposes. (Full course.)

601 - English 214. Reports, and Précis Writing

Prerequisite: English 211. A general introduction to the techniques of preparing reports, précis minutes and other special types of concise and accurate expository prose. Class members are encouraged to co-ordinate their assignments with their other studies or their daily work. (Half course.)

601 - English 215. Public Speaking

Prerequisite: English 211. The aim of this course is to develop in the student the ability to express himself more effectively in every day life, as well as to give practice in speaking before groups of people. (Half course.)

601 - English 216. Public Speaking, Advanced

Prerequisites: English 211 and 215. Students in this course will be trained in the preparation and delivery of major speeches and lectures, during which they will be subject to questioning of the type to be expected in normal speaking engagements. (Half course.)

601 - English 221. Introduction to English Literature

This first year course studies the development of English literature from Chaucer to the present through the examination of individual works and their social background. Students are expected to attend regular conferences in addition to the lectures. (Full course.)

601 - English 222. Literature and the Modern World

Intended primarily for students in science or commerce, this introductory course is devoted mainly, although not exclusively, to a study of the literature of this century. (Full course.)

601 - English 241. World Literature—Classical

Through the medium of the best English translations, this course attempts to give the student a clear knowledge and appreciation of the great masterworks of thought and expression that are an important part of his cultural heritage from the Ancient World. (Half course.)

601 - English 242. World Literature—Medieval

A course complementary to English 241 which explores, through the reading of modern English versions, the literary heritage of the middle ages from Boethius to Dante; writings of the early Christian Church; Irish, Old English, Romanesque, Arthurian, Teutonic, Romance, and Late Latin Literature. (Half course.)

601 - English 243. World Literature—Modern

A course complementary to English 241, which attempts to extend the literary experience of the student beyond the confines of his mother tongue, and of those secondary languages which he is ordinarily able to learn. Through the medium of the best English translations, a study will be made of the outstanding literature of other modern languages, including the French, German, Russian, Italian, Spanish, and Scandinavian. (Half course.)

601 - English 244. Canadian Literature

This course provides for the study of Canadian prose and poetry written in or translated into English. Particular emphasis is placed upon contemporary writers. (For a similar and complementary course in French, see French 231.) (Full course.)

601 - English 253. Shakespeare

Prerequisite: English 221. A study of Shakespeare's achievements as dramatist and poet, and the relationship of his work to the social and literary traditions of his day. Shakespeare's work as a whole will be surveyed in some detail: close attention will be paid to some five or six plays and to the Sonnets. (Full course.)

601 - English 261. Appreciation of Poetry

Prerequisite: English 221. A study of the principles of poetry and its forms with special emphasis on the reading and analysis of all types of poetry with a minimum of historical and biographical detail. (Half course.)

601 - English 262.　The Modern Drama

Prerequisite: English 221. A study of the evolution of the modern drama. Emphasis will be placed upon the plays of Ibsen, Shaw, and subsequent dramatists. (Half course.)

601 - English 418.　Creative Writing (Poetry)

Prerequisite: English 211. This course offers advice and a critical reading of their work to advanced students with a special interest and ability in written expression. It is open to undergraduates only, and admission to the course is dependent upon the approval of the instructor. (Half course.)

601 - English 419.　Creative Writing (Prose)

Prerequsite: English 211. This course offers advice and a critical reading of their work to advanced students with a special interest and ability in written expression. It is open to undergraduates only, and admission to the course is dependent upon the approval of the instructor. (Half course.)

601 - English 431.　Literature of the English Renaissance

Prerequisites: English 221 and 253. A study of non-dramatic literature from Wyatt to Dryden. (Full course.)
NOTE:—Credit will not be given for more than two of English 431, 432, 433, and 468.

601 - English 434.　English Literature of the 18th Century

Prerequsities: English 221, and one other full course in English Literature. A study of the works of major writers in England from 1700 to 1800. (Full course.)

601 - English 435.　English Literature of the Romantic Period

Prerequisite: English 221. This course is primarily a study of English poetry from Blake to Keats, but some reference will be made to representative prose of the period. (This course is not open to students who have credit for English 102.) (Half course.)

601 - English 436.　Victorian Literature

Prerequisite: English 221. A study of the works of major writers in England from 1830 to 1900. This course may not be taken after English 102. (Full course.)

601 - English 445.　American Literature

Prerequisite: English 221. A study of American prose and poetry from colonial times to the twentieth century. (Full course.)

601 - English 454.　Chaucer

Prerequisites: English 221, and one other full course in English Literature. A preliminary study of Chaucer's life and time: a systematic reading of Chaucer's works and a study of the language. (Half course.)

601 - English 455.　Milton

Prerequisites: English 221, and 253. A study of the poetry and prose of John Milton. This course may not be taken after English 106. (Half course.)

601 - English 461.　Modern Poetry

Prerequisites: English 221 and 261. A study of the works of major poets in the English language in the twentieth century. (Half course.)

601 - English 463.　The English Novel

Prerequisite: English 221. A study of the origin and development of the English Novel to the end of the Nineteenth Century with special emphasis on readings from Defoe to Henry James. (Full course.)

601 - English 464.　Modern Fiction

Prerequisite: English 221. A study of the types, techniques, and themes of modern prose fiction. (Half course.)

601 - English 467.　Literary Criticism

Prerequisites: At least three full courses in English literature. This course offers both a history of literary criticism from antiquity to the present and studies in the practice of the best contemporary critics. (Full course.)
NOTE:—Credit will be given for only one of English 467, or English 456 and 466.

601 - English 468.　English Renaissance Drama

Prerequisites: English 221 and 253. A study of the English drama in the 16th and 17th centuries. (Full course.)
NOTE:—Credit will not be given for more than two of English 431, 432, 433, and 468.

601 - English 471.　Advanced Study of a Selected Period or Author

Senior students who wish to make an advanced study of a selected period or author will be admitted to this course. The work of each student will be supervised by the member of the English staff whose major field of interest is closest to the topic which the student intends to investigate. (Half course.)

601 - English 472.　Advanced Seminar in a Special Subject

This course, intended for senior students with a good background of English courses, is designed to provide an opportunity for cooperative study and discussion of literature at a more advanced level than the normal lecture course will allow. It is taught, from year to year, by different members of the English faculty, and the subject itself changes in order to take advantage of the seminar leader's special talents and current interests. The special subject for 1961-62 will be:— The Problem of Morality in Modern Literature. (Full course.)

601 - English 481.　Anglo-Saxon

Prerequisite: At least three full courses in English Literature. A study of language and literature in the Anglo-saxon era. (Full course.)

English 254.　The English Bible

A brief study of the Bible as literature and its development through the centuries. Particular attention is given to certain parts of the text. (Half course.)
This course is no longer offered. See Religion 251 and 252.

English 432.　English Literature in the 16th Century

Prerequisites: English 221, and 253. In addition to the non-dramatic poetry and prose of the period, this course includes a study of the Elizabethan and Jacobean drama apart from Shakespeare. (Full course.)
This course is no longer offered.

English 433.　English Literature of the 17th Century

Prerequisites: English 221, and 253. This course may not be taken by students who have credit for English 106. A study of literature from Donne to Dryden (excluding Milton). (Full course.)
This course is no longer offered.

English 465.   Literary Criticism

Prerequisite: At least two full courses in English Literature. This course is a study of the factors involved in making literary judgments. It is not a history of criticism.   (Half course.)

This course is no longer offered.

English 466.   History of Literary Criticism

Prerequisite: At least two full courses in English Literature. A survey of critical thought from Aristotle to the present day.   (Half course.)

This course is no longer offered.

Major in English

Attention is drawn to the statement on majors on pages 89-96.

THE FINE ARTS

Douglass Burns Clarke, *Professor of English and Fine Arts, and Chairman of the Department.*

Alfred Pinsky, *Assistant Professor of Fine Arts.*
Leah Sherman, *Assistant Professor of Fine Arts.*

602 - Fine Arts 211.   Studio Course in Painting (Introductory)

Prerequisite: Fine Arts 231. An introductory studio course in painting that investigates the language of picture-making. Shapes, lines, colours, textures, rhythms, patterns, and forms are explained in their relation to the world around us, to ideas, and to each other. (Partial or unit course students wishing to study Art will register in Sir George Williams School of Art.)   (Full course.)

602 - Fine Arts 212.   Stage Design

Prerequisite: Fine Arts 211 or equivalent. An introductory course in the design of stage scenery and costume.   (Half course.)

602 - Fine Arts 221.   Studio Course in Modelling and Sculpture (Introductory)

Studio work is provided for undergraduate students who wish to acquire skills in modelling and sculpture. Continuation is possible through a three year period (See Fine Arts 421 and Fine Arts 422). Details of the additional fee charged for this course are available from the Bursar. Partial students wishing to study sculpture will register in Sir George Williams School of Art. (See separate announcement.) (Half course or full course.)

602 - Fine Arts 231.   Basic Principles of Art

An introductory course in art in which lectures and discussion are combined with elementary studio work. Principles common to all art are discussed, with the emphasis placed upon the recurring problems of the painter. An analysis is made of the various means by which the artist has interpreted those problems throughout the history of painting. The studio work consists of basic experiments with the elements used in painting to help the student towards an understanding and use of art as a visual language, No training or background in art is required and the course is planned to provide an opportunity for non-artists to enjoy creative activity and expression. (Full course.) Lectures and studio period.

602 - Fine Arts 232.   The Understanding of Architecture and Sculpture

To enable the student to understand and appreciate great works in architecture and sculpture, and to develop a discriminative understanding of three-dimensional form in design and in his architectural environment, the main types, styles, and techniques of these arts are explained and illustrated. To understand their significance, the student is encouraged to become familiar with great examples of these arts through pictorial reproductions, slides, models, museum visits, and field trips. (Half course.)

602 - Fine Arts 233.   The Understanding and Appreciation of Music

To enable the student to understand and appreciate the great music of the world, and to develop taste and discrimination in music without the necessity of learning to play an instrument. The work of the course consists to a great extent in the actual hearing and analysis of the various types of music and composers, and in musically illustrated lectures and discussion. NOTE: Students who have previously received credit for Fine Arts 234 may not take Fine Arts 233 for credit. (Half course.)

602 - Fine Arts 234.   Musical Theory and Form

A more advanced course for the non-performer, affording a more detailed study of musical form, harmony and rhythm, melody, with some consideration of the elementary aesthetics of music. Students with little or no listening experience should take Fine Arts 233 previously. (Half course.)

602 - Fine Arts 241.   The History of Ancient and Medieval Art

A survey of the development of architecture, sculpture, and painting in ancient Egypt, Greece, and Rome, and in Early Christian and Medieval Europe, illustrated by an extensive collection of coloured and black-and-white slides, models, and other illustrative material. (Half course.)

602 - Fine Arts 242.   The History of Renaissance Art

A survey of the history of the development of Western Art from the fifteenth to the nineteenth centuries, illustrated by an extensive collection of coloured and black-and-white slides. (Half course.)

602 - Fine Arts 243.   The History of Modern Art

A survey of the history of Western Art during the latter part of the nineteenth, and the earlier part of the twentieth centuries. This course aims at an understanding and an evaluation of the various movements in modern art and of their relations to modern life. Illustrated. (Half course.)

602 - Fine Arts 244.   Canadian Art

A survey of Canadian art beginning with native Indian objects and concluding with a study of styles and influences in modern Canadian painting, sculpture, and architecture. Illustrated. (Half course.)

602 - Fine Arts 245.   The History of Music

A study of the development of music in relation to cultural history from antiquity to the present day, stressing the early formative period up to the peak of polyphonic writing. Topics for discussion will include: Greek, Chinese, and Hebrew music; sacred and secular monody; polyphony; Ars Antiqua; Ars Nova; Netherlands Schools; motet and madrigal; the "classical" outlook; the "romantic" outlook; impressionism; neoclassicism; atonalism; jazz and its influence. The course will be illustrated by recordings. No special background of musical training is required. (Half course.)

602 - Fine Arts 246.   Beethoven

Prerequisite: Fine Arts 234 or its equivalent. A study of the life and works of Ludwig von Beethoven. Beethoven's compositions as a whole will be surveyed; detailed studies such as the stylic changes as illustrated in the quartets, advances in formal design, the problem of emotional content, and several other specific topics related to individual compositions will be discussed in full. This course will be illustrated with copious musical examples. (Half course.)

602 - Fine Arts 247.   The History of the Theatre

Study of the development of theatrical production and the drama brings before the student the whole shifting scene of manners and customs, ideals and moral standards of the ages. This course traces the development of the theatre from the time of the Greek choric dance to the modern talking picture and legitimate stage, showing at each step how the culture of that age has been condensed and reflected in the vital and permanent art form of the theatre. (Half course).

602 - Fine Arts 248.   The History of Interior Design

A survey of the history of interior design in western civilization, outlining briefly how particular styles developed out of the social customs, mores, and general spirit of the times. Special emphasis will be laid on the Renaissance, XVIIIth Century, and contemporary styles. (Half course.)

602 - Fine Arts 251.   Art Techniques for Classroom Use

Techniques and materials of art for use in average classroom situations. A combination studio and lecture course of particular interest to teachers. Students are introduced to various creative art media including painting, collage, construction, modelling, and are encouraged to see their possibilities in relation to children's art at different levels. Methods of display and exhibitions of children's art work are dealt with, and means of correlating art with other subjects on the curriculum are considered. The importance and nature of art in child development is stressed with aid of films, slides, and selected readings. (Full course.)

602 - Fine Arts 252.   The Technique of Play Production

A study of the fundamental theories of the aesthetics of the theatre and their relationship to the arts contributing to production. Students will participate in a practical programme of productions which will entail work in acting, staging, voice production, pantomime, make-up, lighting, and scenic design. Lectures and practice. (Full course.)

602 - Fine Arts 411.   Studio Course in Drawing and Painting (Intermediate)

A more advanced treatment of the various media and pictorial composition, with drawing and painting from life and further study of colour theory. Special classes in design are continued, and three-dimensional problems are introduced, while two-dimensional problems now include the interpretation of subject matter in terms of design. An inventive and personal use of subject matter is again emphasized and the student is led to realize the possible variety of expression of his visual and emotional world. The study and interpretation of all schools of art, including naturalism and abstract art, helps the student through exploration to discover his own means of expression and development. (Open to undergraduates only.) (Full course.)

602 - Fine Arts 412.   Studio Course in Drawing and Painting (Advanced)

An advanced course in which the student is encouraged to make his own projects, and is given the opportunity to do creative work under guidance and criticism. (Full course.)

602 - Fine Arts 421.   Studio Course in Modelling and Sculpture (Intermediate)

This is the second year of a studio course in modelling and sculpture. (See Fine Arts 221). (Half course or full course.)

602 - Fine Arts 422.   Studio Course in Modelling and Sculpture (Advanced)

This is the third year of a studio course in modelling and sculpture. (See Fine Arts 221). (Half course or full course.)

602 - Fine Arts 431.   Formal Analysis of Great Works of Art

Prerequisite: Fine Arts 231. An advanced course in art principles. Through the formal analysis of selected masterpieces of painting and sculpture the student is led to a fuller comprehension of the nature of formal order in the arts. (Full course.)

602 - Fine Arts 453.   Perception and Design

This course aims at the awareness and use of design principles in everyday life. The perception of the visual aspects of our environment is emphasized, and integrated with formal and functional elements of design. The course includes lectures and laboratory experiments planned to stimulate perception and creativity in the following areas:—interior arrangement and design; selection of useful objects; response to the effects of mass media; concepts of contemporary architecture. Lectures and studio. (Half course.)

602 - Fine Arts 461.   Introduction to Aesthetics

This course provides an introduction to the philosophy and psychology of aesthetics. Topics will include the nature of beauty and art, aesthetic experience, symbolific thinking and expression, art as symbolific activity, art as communication, and the principles of formal organization underlying all the arts: music, poetry, drama, sculpture, and painting. (Full course.)

Major in Fine Arts

Attention is called to the statement on majors on pages 89-96.

FRENCH

James Henry Whitelaw, *Professor of Modern Languages, and Chairman of the Department.*
Serge Losic, *Lecturer in Modern Languages.*

Note: French 211, 212 or the equivalent is normally a prerequisite for all other courses in French. However, no student whose natural language is French will be admitted to either French 201, 211, 212, or 213. Such students will register for other courses in French.

603 - French 201.   Beginners' French

This course is open to students who have not included French as one of their qualifications for admission; and those whose first language is not French. Instruction is given in grammar, translation, prose composition, and oral French. Satisfactory progress in this course will admit students to French 211, 212. Lectures and laboratory. (Full course.)

603 - French 211.   Introduction to College French

The aims of this course are (a) to increase the student's powers of comprehension of the spoken language, (b) to enable the student to read French with greater facility and (c) to correct common grammatical errors. Texts are selected from French and French-Canadian literature, as well as from periodicals and the daily press. This course is not designed to give practice in oral French. No student will be admitted to this course, unless he has completed satisfactorily four years of high School French, or the equivalent. No student is permitted to take both French 211 and 212 for credit. (Full course.)

603 - French 212.   Introduction to College French

This course is generally similar to French 211, except that a considerable proportion of the time is devoted to conversational French, with less time being given to translation and composition. For this purpose, enrolment is restricted to twenty students. No student will be admitted to this course, unless he has completed satisfactorily four years of High School French, or the equivalent. No student is permitted to take both French 211 and 212 for credit. (Full course.)

603 - French 213.   French Idioms, and Vocabulary.

Prerequisite: French 211, 212, or the equivalent. The aim of this course is fluency and accuracy in the spoken language. Topics for discussion are based on current events and everyday situations. Enrollment is restricted to twenty students. (Full course.)

FRENCH LITERATURE AND CULTURE

The following courses constitute a survey of French and French-Canadian literature. The literature of each period is related to its historical and social background, and notice is taken of developments in other cultural fields, such as painting, architecture and music. Representative texts are studied and discussed in class. The courses are given in French, speed of delivery being suited to the standard of comprehension of the class. Class discussion offers opportunities for oral practice. Some time will be given to composition.

Prerequisite: French 211 or 212, or the equivalent. Students whose oral French is weak are advised to take French 213 before undertaking courses in Literature.

603 - French 231.   French Canadian Literature and Culture

No prerequisite except ability to read French. The course is given in English. After a summary of the achievement of past generations, the main emphasis is on contemporary literature, the theatre of our time, and French-Canadian expression in the arts. (Half course.)

603 - French 421.   French Culture in Medieval and 16th Century France

The Age of the Epic; the Romances in prose and verse; the poetry of the Troubadours; the Allegories; early dramatists and historians; the lyric poetry of Villon and Marot; the poets of the Pléiade; Rabelais; Montaigne. An outline is also given of the development of the language from a Latin dialect to its present form. (Half course.)

603 - French 422.   French Literature of the 17th Century

This course covers the great classical period of French literature: the reform of the language, and the formation of the Classical doctrine; the tragic drama of Corneille and Racine; the comedy of Molière; the philosophy of Descartes and Pascal; the moral satire of La Fontaine and La Bruyère; the oratory of Bossuet; the beginnings of the Novel. (Full course.)

603 - French 423.   French Literature of the 18th Century

The "century of the philosophers"—The great interest in scientific knowledge, leading to the composition of the Encylopédie; Montesquieu, Voltaire, Rousseau; the comedy of Marivaux and Beaumarchais; the poetry of Chenier; the beginnings of the Romantic movement; the literature of the Revolution. (Half course.)

603 - French 425.   French Literature of the 20th Century

Prerequisite: One full course in French Literature, preferably French 427. A study of the work of major French writers from the beginning of the 20th Century to the present day. It is recommended that French 424 be taken previously. (Full course.)

603 - French 426.   Literature of the Romantic and Realist Periods

The fore-runners of Romanticism—Chateaubriand and Madame de Staël. Romanticism—Lamartine, Vigny, Hugo, Musset. The novel—Stendhal, Balzac, Flaubert, Zola. Students who have credit for French 424 may not take this course for credit. (Full course.)

603 - French 427.   Nineteenth Century Poetry from Baudelaire to Mallarmé

Prerequisite: French 426. The beginnings of modern French poetry—Nerval and Baudelaire. The Parnassiens—Gautier, Leconte de Lisle, Hérédia. The Symbolists—Rimbaud, Verlaine, Mallarmé. Students who have credit for French 424 may not take this course for credit. (Half course.)

603 - French 451.   Advanced Study of a Special Subject

Prerequisites: Two full courses in French Literature. This course, open only to fourth year students majoring in French, provides the opportunity of studying a subject in depth. Students work individually under supervisor. (Full course.)
Subject for 1962-63: Baudelaire, Père de la Poésie Modern.

French 424.   French Literature of the 19th Century

The fore-runners of Romanticism — Chateaubriand and Madame deStaël; Romanticism — Lamartine, Vigny, Hugo, Musset; the novel — Stendhal, Balzac, Mérimée; Realism and Naturalism — Flaubert, Maupassant, Zola; the poetry of Baudelaire, the Parnassiens, the Symbolists. (Full course.)
This course is no longer offered.

Major in French

Attention is called to the statement on majors on pages 89-96.

GERMAN

Annamaria Ketter, *Lecturer in German.*

604 - German 211.   Introductory Course in German

A beginner's course in the German language which is designed, in one year, to make the student conversant with the grammar, pronunciation and ordinary vocabulary of the language. Emphasis is placed upon learning to speak the language, as well as to read and write it. No student whose first language is German will be admitted to this course. Lectures and laboratory. (Full course.)

604 - German 212.   German Language - Intermediate

Prerequisite: German 211 or equivalent. Advanced instruction in the language. Emphasis upon idiom and usage in conversation and composition. Representative readings from the works of German writers. No student whose first language is German will be admitted to this course. (Full course.)

604 - German 215.   German for Reading Knowledge

This course will give the student sufficient background in the structure of the language to be able to read German with reasonable competence. Practice material will be both technical and non-tcehnical. No previous knowledge of the language is required. No student whose first language is German will be admitted to this course. Credit will not be given for both German 211 and German 215. This is a terminal course, and may not be used as a prerequisite for advanced courses in German.   (Full course.)

GREEK

Paul Frederick Widdows, *Assistant Professor of Classics.*

605 - Greek 211.   Introductory Course in Greek

The purpose of this course is to enable a student, in one year, to gain an adequate knowledge of Greek grammar and syntax and to read simple passages of Greek quickly and accurately. (Full course.)

605 - Greek 212.   Greek Language and Literature

The purpose of this course is to complete the study of Greek grammar and syntax begun in Greek 211, and to enable students to begin reading Greek authors. A book of Xenophon or Herodotus and the Gospel of St. John will be read. (Full course.)

605 - Greek 421.   Greek Literature

This is essentially a reading course involving the study of certain of the great works of Greek literature. The books to be read are the Gospel of St. Mark, a book of Homer, and a Greek play. It is assumed that students taking this course have an adequate knowledge of Greek grammar and a fair vocabulary. (Full course.)

605 - Greek 422.   Greek Literature

A further study of Greek literature (to follow Greek 421) including a play by Sophocles, a book by Thucydides and a book by Plato. (Full course.)

HEBREW

606 - Hebrew 211.   Introductory Course in Hebrew

The purpose of this course is to enable a student, in one year, to gain an adequate knowledge of Hebrew grammar and syntax and to read simple passages of Hebrew quickly and accurately. The student is introduced to the Bible through the reading in class of a book from the old Testament. (Full course.)

606 - Hebrew 212.   Intermediate Course in Hebrew

Prerequisite: Hebrew 211 or equivalent. Readings in The Bible and an introduction to Modern Hebrew Literature. This course will also complete the study of Hebrew grammar and syntax begun in Hebrew 211, with special emphasis on modern Hebrew usage. (Full course.)

606 - Hebrew 421.   The Scriptures

Prerequisite: Hebrew 212. Reading of a selected Book with an eye to the linguistic, literary and historical analysis of the text. The Book of Ruth will be read to serve as an introduction. One of the Prophets will then be studied as the main subject. In the latter part of the course the student will be introduced to the use of commentaries in Hebrew, upon both the grammatical and the textual level. Introduction to historical development of the different layers of the Hebrew language through selected texts. (Full course.)

JOURNALISM

607 - Journalism 211.   News Writing and Reporting

Prerequisite: English 211 or equivalent. An introduction to the technique of newspaper writing and reporting, concentrating mainly on the writing of news articles but touching such related topics as the following: the identification and obtaining of news, its preparation and distribution, the structure of the modern newspaper, the role of the newspaper in a democratic society, the ethics of journalism, various types of newspaper writing. (Half course.)

LATIN

Paul Frederick Widdows, *Assistant Professor of Classics.*

608 - Latin 201.   Beginners' Latin

This course is designed for students who have had no previous Latin and is particularly recommended for those students who wish to be prepared for Latin 211. The course offers instruction in Latin Grammar, Translation and Prose Composition. Students who have received credit towards admission for High School Latin will not receive credit for this course. (Full course.)

608 - Latin 211.   Latin Composition and Translation

Advanced instruction in Latin prose composition and syntax with practice in sight translation. The course also includes translation and literary interpretation of prescribed selections from the Latin classics in poetry and prose. (Full course.)

608 - Latin 421.   Latin Literature

The purpose of this course is to provide students, interested in the subject, with a wider and deeper knowledge of the Roman people, their history, life and literature, by the reading of selected works of the best known Latin writers of the Late Roman Republic and the Early Roman Empire. (Full course.)

608 - Latin 422.   Latin Literature (Advanced)

A continuation of Latin 421, concentrating on a particular period or the works of a particular author, e.g. Juvenal and Tacitus, or Lucretius. The course also includes instruction in continuous prose composition.   (Full course.)

608 - Latin 423.   Latin Literature

A parallel course to Latin 422, covering different authors, e.g. Latin Comedy, Latin Elegists or Horace. As Latin 422 and Latin 423 will not usually be given in the same year, Latin 423 may be taken before Latin 422.   (Full course.)

MATHEMATICS

Mathematics 201, 211, 221, 231, 241, 431, 441, 451, 453, 454, 455, 456 461, 462, 463

See Natural Sciences Division for description of courses.

PHILOSOPHY

William Ross Fraser, *Professor of Philosophy, and Chairman of the Department*.
Roger B. Angel, *Assistant Professor of Philosophy*.

609 - Philosophy 211.   A General Study of Philosophical Problems

The purpose of this course is to distinguish philosophy from art, science, and religion; to study the critical work of philosophy with regard to some basic concepts and methods relevant to such fields; and to consider the constructive work of philosophy as shown in the development of major world-views. (Full course.)

609 - Philosophy 221.   Great Philosophers, Ancient, Medieval, and Modern

This course aims to make the student conscious of his own intellectual heritage by means of a first-hand acquaintance with the thought of those philosophers, from Plato to the present day, who have been most influential in the moulding of the Western mind. It will also illuminate the character of philosophic problems by showing how they persist through a variety of forms, and are restated from age to age. Readings, lectures and discussions. (Full course.)

609 - Philosophy 231.   Philosophy of Religion

This course considers the nature, method, and value of religion; the relation between religion and science, and between religion and philosophy; the concepts of God, prayer, evil, freedom, and immortality: and outstanding types of religious philosophy. (Half course.)

609 - Philosophy 241.   Ethics

This course begins with a brief introduction to the major theoretical problems of ethics. An intensive study of the ethical theories of Plato, Mill and Kant is then pursued. (Half course.)

609 - Philosophy 242.   Social Philosophy

The purpose of this course is to examine the problem of securing agreement, between the individual and others, on various questions of "public" morality. Special attention is given to conflicting attitudes concerning women in society, medical ethics, censorship in all fields, political, economic, and democratic ideals. (Half course.)

609 - Philosophy 261.   Philosophic Ideas in Literature

This course is a critical survey of concepts that have been widely influential through poetry and prose. Theories of beauty, of knowledge, of human conduct and religion, and of cultural change receive special attention. Class discussion on masterpieces in world literature is particularly encouraged. (Full course.)

609 - Philosophy 411.   Contemporary Philosophy

Prerequisite: Philosophy 211 or 221. A critical study of contemporary tendencies in Logic, Epistemology, Theory of Value, and Metaphysics. There will be readings and class discussions in respect of such philosophers as Santayana, Russell, Whitehead, and Dewey with special reference to their outlook on scientific methodology, education, ethical and aesthetic values, political and economic problems, and the philosophy of religion. (Full course.)

609 - Philosophy 412.   Systems of Philosophy

Prerequisite: Philosophy 211 or 221. This course seeks finer appreciation of attempts to consider man and nature from a persisting point of view. Among the systems of philosophy considered are supernaturalism (including Scholasticism), naturalism (including dialectical materialism), idealism, realism, and pragmatism. Special attention is given to students desiring discussion on implications of various world-views. (Full course.)

609 - Philosophy 413.   Contemporary Epistemology

Prerequisite: Philosophy 211. A systematic introduction to contemporary problems of epistemology with special reference to idealism, American and English realism, empirical pragmatism, conceptual pragmatism, phenomenalism, physicalism, and linguistic analysis. (Half course.)

609 - Philosophy 451.   Logic

Beginning with stress on different functions of language and on errors in symbolism, this course considers the problem of definition, mediate and immediate inferences, fallacies in deduction, and extension of traditional logic. (Half course.)
Note: Credit will not be given for both Philosophy 451 and 454.

609 - Philosophy 452.   Scientific Methods

In this course, after study of the nature of a scientific system, and of inductive reasoning, there follows an analysis of the principles of causal determination. The next stage deals with the formal requirements of a scientific hypothesis and of hypothetical methods. The logic of the various experimental methods used in testing hypotheses is then carefully examined. After a brief survey of statistical methods, the course ends with a comparison between the experimental and the historical sciences. Students who have completed Philosophy 106 may not take this course for credit. (Half course.)

609 - Philosophy 453.   Philosophy of Science

Prerequisites: Philosophy 211, and 451 or 452, unless special permission allows for alternatives. This study deals with the analysis of major concepts and presuppositions of the sciences and with attempts to formulate a philosophy compatible with the broader implications of scientific theories. Among different interpretations of science, are considered the positivistic, the idealistic and the materialistic. In this course lectures are kept at a minimum, and students present papers to be discussed and criticized. (Full course.)

609 - Philosophy 454.   Introduction to Modern Logic

Prerequisite: Philosophy 211. Designed for the student who is interested in the technical aspects of logic, this course will introduce him to the techniques of symbolic logic with special reference to valid argument forms, definitions, truth-tables and quantification. (Half course.)
Note: Credit will not be given for both Philosophy 451 and 454.

Major in Philosophy

Attention is called to the statement on majors on pages 89-96.

RELIGION

Rev. Boyd G. Sinyard, *Assistant Professor of Religion.*

610 - Religion 211. The Religions of the Near East

Introduction to the study of religion; religion in primitive cultures; Babylonian-Sumerian, Egyptian, Greek and Roman religion. Historical and critical introduction to Zoroastrianism, Judaism, Manichaeism, Mithraism and Islam. Complemented by Religion 212. (Half course.)

610 - Religion 212. The Religions of India and the Far East

Introduction to the historical and systematic study of Hinduism, Jainism, Buddhism, Sikhism, Confucianism, Shintoism and Zen Buddhism. Consideration is given to the philosophical, ethical and cultural implications as well as the theological. (Half course.)

610 - Religion 221. Christianity

An academic approach to the understanding of the major tenets of Christianity. Attention is given to contemporary Christian thought and its relation to other fields of enquiry. Complemented by Religion 231. (Half course.)

610 - Religion 222. Religious Education

Curriculum and practice in religious education. This course should be of special interest to teachers, YMCA secretaries, etc. (Half course.)

610 - Religion 231. Christian Ethics

Religion 221 is recommended as a prerequisite. The theological and philosophical presuppositions of Christian Ethics; the teachings of Jesus; the Christian ethical norm; Christian ethics and moral philosophy. (Half course.)

610 - Religion 241. History of Christian Thought — (a)

A survey of the development of Christian thought to the early middle ages supplemented with selected readings. (Half course.)

610 - Religion 242. History of Christian Thought — (b)

A continuation of Religion 241. The medieval synthesis; the reformation; enlightenment and romanticism; liberalism, socialism and historical criticism; contemporary Christian thought. (Half course.)

610 - Religion 251. Introduction to the Old Testament

An introduction to Old Testament studies; the history, culture and religion of Israel; critical survey of Old Testament literature. (Half course.)

610 - Religion 252. Introduction to the New Testament

An introduction to New Testament studies; a critical survey of New Testament literature, considering historical setting, history of text, cultural and religious significance. (Half course.)

610 - Religion 443. Contemporary Philosophy of Religion

Prerequisite: Two full courses in religion and/or philosophy or approval of the instructor. An advanced course in philosophy of religion involving a critical and systematic study of selected trends and authors in religious philosophy. (Full course.)

See also: Philosophy of Religion - Philosophy 231.

RUSSIAN

611 - Russian 211. Introductory Course in Russian

An introductory course designed to act as a basis for those wishing to learn to read and speak the Russian Language. No student whose first language is Russian will be admitted to this course. Lectures and laboratory. (Full course.)

611 - Russian 212. Intermediate Russian

Prerequisite: Russian 211 or equivalent. Advanced oral and grammatical work. Translation and reading of varied texts, including a Russian novel in the original. No student whose first language is Russian will be admitted to this course. (Full course.)

SPANISH

612 - Spanish 211. Introduction to the Spanish Language

A beginner's course in the Spanish language, which is designed in one year to make the student conversant with the main grammatical principles, pronunciation and ordinary vocabulary of the language. Practice is given in reading, writing and conversation, particular emphasis being placed on oral work. In the second term classes are conducted as far as possible in Spanish. No student whose first language is Spanish will be admitted to this course. Lectures and laboratory. (Full course.)

612 - Spanish 212. Intermediate Spanish

Prerequisite: Spanish 211. In this course conversation and reading are continued and more work is offered in translation and composition. Included also are readings from Spanish literature, designed to aid in the development of effective expression in the language. As far as possible all classes are conducted in Spanish. No student whose first language is Spanish will be admitted to this course. (Full course.)

612 - Spanish 421. Advanced Spanish and Introduction to Literature

Prerequisite: Spanish 212 or equivalent. Advanced composition and oral work. Introduction to Spanish and Spanish-American Literature. Classes will be conducted in Spanish. (Full course.)

612 - Spanish 422. Advanced Spanish and Introduction to Literature (Alternate)

Prerequisite: Spanish 212 or the equivalent. A similar course to Spanish 421, but covering a different literary period. This course may be taken before or after Spanish 421. (Full course.)

Spanish 213. Advanced Spanish

Translation, composition, correspondence, and essay-writing of an advanced character. Ample opportunity will be given for conversational practice and self-expression in the language. All lectures will be conducted in Spanish. (Full course.)
This course is no longer offered.

Social Sciences Division

THE SOCIAL SCIENCES DIVISION

James Winfred Bridges, *Senior Professor in the Social Sciences Division.*

700 - Social Science 210.   General Course in the Social Sciences

This pandemic course has the same point of view and objectives with regard to the social sciences as Natural Science 210 has regarding the physical sciences. It has a twofold purpose; first, to introduce the student to some of the basic concepts and subject matter of the various social sciences; second, to provide him with some knowledge of contemporary society and the problems which confront it. The social sciences surveyed are Anthropology, Psychology, Sociology, Human Geography, History, Economics, and Political Science. (Full course.)

700 - Social Science 251.   General Semantics

A course in the use and structure of language, and other symbol systems, as they affect problems of everyday living. An attempt is made to show how the static meanings arising from many of our language habits work to prevent ready adjustment to the situations of a constantly changing world. Scientific orientation is considered with a view to its application in the broader field of human affairs, with special emphasis on communication. (Half course.)

ECONOMICS

Arthur Lermer, *Professor of Economics, and Chairman of the Department.*
John Wilfred O'Brien, *Associate Professor of Economics.*
Muriel Armstrong, *Assistant Professor of Economics.*
Abraham Tarasofsky, *Assistant Professor of Economics.*
Tilak Nijhowne, *Lecturer in Economics.*

Note: For regularly enrolled students, Economics 211 is a prerequisite for all other courses in Economics. Commerce students interested in general courses in Economics should take, in addition to Economics 211,—Economics 221, 271, 451 or 461.

701 - Economics 211.   Introduction to Economics

While this course is an essential introduction for the student who is proceeding to other courses in economics, it is designed to inform every student, whatever his field may be, of some of the basic principles of modern economic theory and their relationships to everyday business. The concept and purpose of national income analysis is explained, and the inter-related problems of consumer spending, saving and investment are discussed with special reference to the banking system, credit policies and the role of government in the business world today. This is co-ordinated with an outline of the theory of the firm and the relation of the individual firm to the whole economy, tracing the process of price-determination through an analysis of the concepts of competition and monopoly. (Full course.)

701 - Economics 221.   General Economic History

Prerequisite: Economics 211. This course is designed as a general inquiry into the process of economic change from the beginnings of the ancient civilizations to the industrial revolution. Emphasis is placed on the Western World. An attempt is made to test some basic principles of Dynamic Economic Theory by historical evidence and the application of the historical method. (Full course.)

701 - Economics 223.   Economic Development of French Canada

Prerequisite: Economics 211. French Canadian economic development is considered in relation to the quest for cultural survival of French Canada. This course will review past and present trends in the economic behaviour of French Canadians. Emphasis will be placed on economic growth of Quebec since the Second World War and the economic changes through which French Canada is passing at the present time. The rise of French Canadian economic institutions to prominence, the roles of French Canadian capital and skill, and the influence of the provincial government will be thoroughly discussed. (Half course.)

701 - Economics 271.   Labor Economics

Prerequisite: Economics 211. A study of the theoretical, institutional and sociological aspects of labor relations. In particular, the course will deal with a survey of modern wage theory; the theory and practice of collective bargaining; the scope and limitations of the sociological approach; the history and functioning of trade unions, particularly in Canada; the role of the government and the legislative process in labor relations. (Full course.)

701 - Economics 411.   Intermediate Course in Economic Theory

Prerequisite: Economics 211. This course is designed for the student majoring in economics. It is a basic course in micro-economic theory: market price determination, theory of consumer demand, theory of the firm, and distribution theory. (Full course.)

701 - Economics 412.   Advanced Course in Economic Theory

Prerequisite: Economics 411. A further course in microeconomic theory to follow Economics 411, dealing with particular areas of importance or current interest. (Half course.)

701 - Economics 421.   History of Economic Thought, Ideas, and Theories

Prerequisite: Economics 411. A brief study of the development of economic thought, with special emphasis on the classical and Neo-classical period, as an introduction to modern economic theories. (Full course.)

701 - Economics 422.   Theory of Economic Development

Prerequisite: Economics 211. This course deals with the principles of economic change of Western Civilization. A historical survey of theories of economic dynamics serves as an introduction to modern theories of economic development. An attempt to test these theories in various major nations will then follow. Particular attention will be placed on economic problems of underdeveloped countries. (Full course.)

701 - Economics 424.   Problems of Canadian Economic Development

Prerequisite: Economics 211. This course deals with the basic problems of Canada's economic growth since Confederation. While the historical background is thoroughly treated, strong accents are placed on the application of Principles of Economic Development to the Canadian scene. Canada's role in the "North Atlantic Triangle" is fully investigated. (Half course.)

701 - Economics 441.   Public Finance and Fiscal Policy

Prerequisite: Economics 451. A general study of the principles and practice of government finance, the use of the budget to maintain a stable economy, the public debt, techniques of deficit and surplus finance, war finance, taxation theory. (Half course.)

701 - Economics 442.   Business Cycle Theory

Prerequisite: Economics 451. This course deals with theories advanced to explain fluctuations in industrialized capitalistic economies. Certain standard models of the business cycle are introduced, and the various cycle theories are surveyed. (Half course.)

701 - Economics 444.   Marxism and the Communist Economic Systems

Prerequisite: Economics 211. This course will trace the origin of Marxism, the basic principles of the philosophy of Historical Materialism and the Theory of Economic Development. The Russian Revolution, the role of Lenin and Stalin and the evolving Communist system will be studied, followed by consideration of other Communist patterns such as the Chinese and Yugoslav. A critical evaluation of the theory and its application will round out the course. (Half course.)

701 - Economics 445.   Welfare Economics and the Welfare State

Prerequisites: Economics 211, 444. This course will begin with a theoretical analysis of Welfare Economics and trace the empirical development of various patterns of the Welfare State with particular emphasis on the British, Scandinavian, and American systems. (Half course.)

701 - Economics 451.   Money and Banking

Prerequisite: Economics 211. A study of the nature and function of money; commercial and central banking; aims and techniques of monetary policy; the money market; foreign exchange; development of Monetary theory from the quantity theory to post-Keynesian thought; the problem of inflation. (Full course.)

701 - Economics 461.   International Economic Relations

Prerequisite: Economics 211. A study of the background and development of contemporary international economic problems. The balance of payments and the various equilibrating mechanisms. The theory and operation of the gold standard. World War I and its aftermath: reparations and war debts; inflation; the restoration of the gold standard and its eventual collapse. the experience of the 1930's. Protection. Postwar international institutions: IMF, GATT, etc. The stages of recovery. European integration and the common market. The sterling system and convertibility. European clearing systems. (Full course.)

701 - Economics 481.   Economic Statistics

Prerequisites: Economics 211. The course is an introduction to statistical techniques as applied to economic problems. Special attention is given to index-number construction, time-series analysis, and elementary correlation and sampling. Attention is also paid to source materials, especially for Canadian statistics. (Full course.)

701 - Economics 483.   Mathematical Economics

Prerequisite: Economics 211 and High School Algebra and Geometry. This course is designed to assist students in the acquisition of mathematical tools for intermediate and advanced economic theory. The student will be introduced to selected topics in mathematics with emphasis on calculus. The application of mathematics to economic theory including some linear programming, will be undertaken. (Full course.)

Economics 222.   Economic Development of Canada

Prerequisite: Economics 211. This course covers the history of Canadian economic growth from the first settlement to recent trends in the Canadian economy. An inquiry into the geographic, political, and sociological background of Canadian economic growth will be undertaken. Economic aspects of Canada's relation to the United Kingdom and the United States in retrospect will be fully emphasized. The principal aim of the course is to assist the student to grasp the nature, scope, and significance of the rise of the Canadian economy to the present industrial level. An appreciation of the impact of Confederation, the national policy, Dominion-Provincial relations, the institutional structure of the Canadian economy constitute a major part of this course. (Full course.)

This course is no longer offered. See Economics 224.

Economics 443.   Comparative Economics

Prerequisite: Economics 221. This course deals with major economic systems in their cultural, political, and social settings. After a brief anthropological and historical treatment of past systems such as that of primitive society, feudalism, mercantilism, etc., an inquiry into the philosophies and nature of capitalism, socialism, communism, fascism, the welfare state, etc., will be conducted. Some special cases will be treated separately, e.g. those of India, China, etc. (Full course.)

This course is no longer offered.

Major in Economics

Attention is called to the statement on majors on pages 89-96.

EDUCATION

E. Gault Finley, *Lecturer in Education*.
William D. Johnstone, *Lecturer in Education*.

702 - Education 211.   History of Education

An interpretation of history through analysis of major educational theories and practices in Western Society. (Full course.)

702 - Education 221.   Adult Education

This course is intended for all who are interested in adult education, whether professionally concerned with it or not. The history, organization, philosophy, and problems of adult education both formal and informal will be discussed with particular emphasis upon the current developments in Canada. (Half course.)

702 - Education 231.   Education in Canada

Federal and provincial organization and administration; primary consideration given to the historical development of Quebec's public school system. (Half course.)

702 - Education 411.   Philosophy of Education

Relationship of philosophical concepts and orientations to educational practices. (Full course.)

See also: Psychology 223, Educational Psychology, and Religion 222, Religious Education.

GEOGRAPHY

Harry A. Clinch, *Assistant Professor of Geography.*

703 - Geography 211.　Introduction to Human Geography

Considers the earth as the home of man. A general introduction to geography, which is intended to encourage an appreciation of the relationship existing between physical and cultural distributions over the earth's surface. This course will be concerned with man-land relationships. The broad global patterns of climate, vegetation, relief, soils, and natural resources will be reviewed. The use of maps, charts, diagrams, on the part of the students will be encouraged. Area studies will be introduced from time to time to illustrate the role of geography. Each student will be responsible for a term paper describing, accounting for, and explaining the distribution of population within some given area. (Full course.)

703 - Geography 231.　Elements of Weather and Climate

Prerequisite: Geography 211 or 251. A study of weather and climate from a climatological point of view rather than that of a meteorologist. The chief climatic controls and climatic elements—air temperature, atmospheric pressure and winds, moisture and precipitation, storms and associated weather types. A study of the koppen and Thornthwaite climatic systems and a study of the effect of climate upon plants, animals and man. (Half course.)

703 - Geography 241.　World Political Geography

Prerequisite: Geography 211. A basic study of the principles of political geography. In the first term: the field of political geography; the development of geopolitical thought—space, population, resources; the nature of the state and the concept of national, regional and international organization and relationships and alignments. In the second term: the communist bloc, the Atlantic Basin States, the Mediterranean African world, the Pacific and South Asia neutral states, will be studied as basic units; and the changing character of geopolitical patterns and concepts will be charted and evaluated. (Full course.)

703 - Geography 251.　Economic Geography

This course deals with the way in which geographic conditions influence, and have influenced, the products, the occupations, and the ways of life of the various peoples of the world, and provides an understanding of the natural resources of the world, and the geographical factors which affect their exploitation, transportation and use in the satisfaction of wants. (Full course.)

703 - Geography 261.　General Cartography

A general study of the map as the tool of the geographer. The course will include a history of cartographic development from the earliest times to the present. Emphasis will be placed on map scale; map projection; map symbolism and upon map reading and usage. The use and interpretation of ground and air surveys and such cartographic specialities as diagrams, statistical maps, cartograms, globes and models will also be emphasized. Students will be expected to learn to read maps and diagrams of special scientific nature such as those dealing with landslope, land use, geology, meterology, climatology, oceanography, seismology, archaeology as well as all those related directly to the field of geography. The present day state of world mapping and the chief sources of map issuance will also be noted. Exercises and assignments of a practical nature involving the construction of maps will be expected from all students enrolled. (Full course.)

703 - Geography 411.　Historical and Political Geography of Europe

Prerequisite: Geography 211 or History 213. An historical and political survey of Europe with emphasis on the development of Western European nations from the earliest time to the present. In the modern period emphasis will be placed on the geography of current events and geopolitics. (Full course.)

703 - Geography 421.　Historical and Political Geography of the United States

A survey of exploration, colonization and settlement patterns in the United States. Sectional and regional divisions within the United States, their expression in the internal politics of the United States, and the geopolitical position of the United States in the modern world will be examined. (Full course.)

703 - Geography 431.　Urban Geography

Prerequisite: Geography 211. A study of the prehistoric town, the Greek and Roman town, towns in the Middle Ages, the trading city, the pioneer town and the modern metropolis. The distribution of such towns, their development, growth and internal pattern of organization will be looked at from an historical and geographical point of view. Problems of conurbations and large metropolitan cities in the present age will be discussed and evaluated. (Half course.)

703 - Geography 441.　Geography of Canada, Past and Present

A study of Canada, past and present based on the various natural regions into which the country is divided. In the first half of the course an historical-geographic approach will be taken to bring to the student's attention the main trends in Canadian cultural and historical development from aboriginal times to the present. The changing nature of man-land relationships at different periods of time, and under different forms of occupance will receive particular attention. In the second half of the course the present day pattern of human occupance on a regional and national basis will be analyzed. Special studies on regional problems and on particular economic, social, or political lines of general interest will be included in the course. All students will be expected to complete a term paper for credit. (Full course.)

703 - Geography 451.　Prehistoric Geography of Europe and the Mediterranean

Prerequisite: Geography 211 or History 211. A study of the changing physical and climatic pattern of Europe and the Mediterranean area in the light of the present day geographical knowledge with some attempt to assess the importance of this upon the evolution, migration, and patterns of occupance and distribution of prehistoric man. Special attention will be given to the distribution of archaeological fields, corridors of migration, ethnological distributions, language patterns and the changing patterns of culture. (Half course.)

703 - Geography 461.　History of Geographical Thought

Prerequisites: Geography 211 and one additional course in Geography. A study of the development of the field of geography from ancient times down to the present. Representative geographical works of the Greeks, the Romans, and of the Middle Ages. The Age of Discovery, the 19th and the 20th centuries will be examined and discussed. The present day concepts of the field and function of geography will receive special attention. (Half course.)

HISTORY

Edward Eastman McCullough, *Associate Professor of History,
    and Chairman of the Department.*
Donald E. Ayre, *Lecturer in History.*
Cameron Nish, *Lecturer in History.*

400 level courses should only be attempted by those who have had one or more courses at the introductory level.

704 - History 211.   History of Early Civilization

The story of early mankind is outlined so far as it is known at present, and the origins of the great civilizations of today in Europe and Asia are studied. The survey concludes with a study of the classical civilizations in Greece and Rome, India and China with emphasis on their contributions to later times. (Full course.)

704 - History 212.   History of Medieval Civilization

A survey of civilization from the beginning of the medieval period to the end of the 17th century. Emphasis is placed on the structure of medieval society in Europe and Asia and on the expansion of western civilization into Asia and the New World. (Full course.)

704 - History 213.   History of Modern Civilization

A survey of civilization from the beginning of the 18th century to the present day. Emphasis is placed upon the historical background of outstanding elements and problems in the present world political, social, and economic situation, and developments in science, philosophy, and the arts. (Full course.)

704 - History 221.   History of Canada Since 1534

A study of the growth of Canada from the age of exploration to the present time. Emphasis is placed on the political, economic and cultural developments which are of significance in the understanding of the problems of to-day. (Full course.)

704 - History 413.   History of European Diplomacy, 1870-1939

Prerequisite: History 213 or Political Science 421. This course is a study of the events leading up to the first World War, of the diplomacy of the war itself, and of the truce which culminated in the second outbreak in 1939. (Half course.)

704 - History 416.   The Age of Nationalism (1789 to the Present)

Prerequisite: History 213. An intensive study of the internal development and external relations of the national states since the French Revolution. (Full course.)

704 - History 422.   History of French Canada 1534-1760

An intensive study of Canada during the colonial regime. It will be of benefit to students if they have completed French 211 before taking this course. (Full course.)

704 - History 424.   History of Canada Since 1867

Prerequisite: History 422 or 423. An intensive study of the political, economic and cultural development of Canada since Confederation. (Full course.)

704 - History 431.   History of Britain (1485 to the Present Time)

Prerequisite: One of History 212 or 213. A survey of the political, economic, and social development of modern England. Emphasis is placed on the evolution of parliamentary government in the early period, on the economic changes of the eighteenth and nineteenth centuries, and on the modern growth of democracy and the social service state. (Full course.)

704 - History 432.   History of the British Empire and Commonwealth

The development of the Empire and Commonwealth is surveyed from the American Revolution to the present time. Emphasis is placed upon the history of the various units of the Commonwealth, as well as upon the development of the dependent empire and its partial emancipation. An attempt is made to understand the position of the Commonwealth of Nations in the world to-day, and its probable role in the future. (Half course.)

704 - History 441.   History of Russia

Prerequisite: History 213. This course traces the origin of the Slavic speaking peoples in Europe and the emergence of the Russian Empire. It discusses the ideology and history of bolshevism, and the period under communist government in the U.S.S.R. and among the Slavic peoples. (Half course.)

704 - History 451.   History of the United States Since 1763

Prerequisite: History 213. This course deals with the growth of the United States from the revolutionary period to the present time. The character of the population, the government, and the various voluntary political and labour organizations is studied from an historical point of view. Special attention is paid to the development of foreign policy and to the present position of the country in world affairs. (Full course.)

704 - History 452.   History of the Latin American Republics

This course deals with the political, social, and economic history of Mexico and the countries of South America since independence. The development of each is studied, with special reference to their interdependence. The growth of Inter-Americanism is traced, and attention is given to the place of Latin America in the modern world. (Full course.)

704 - History 453.   History of Colonial America

A comparative survey of the Spanish, English and French empires in America from the age of exploration to the end of the colonial regimes. Political, social and economic developments will be studied in their relation with those of the other colonies and with the later growth of the societies concerned. (Full course.)

704 - History 454.   Inter-American Relations: Canada and the United States

Prerequisite: History 221 or 451. A study of the political, economic, and cultural relations of Canada and the United States between the American Revolution and the present time. (Half course.)

704 - History 455.   Inter-American Relations: The United States and Latin America

Prerequisite: History 451 or 452. A study of the political, economic, and cultural relations of the United States and Latin America between 1800 and the present time. (Half course.)

704 - 461. History of India

This is a study of the origin and development of India and Pakistan. The historical background will be traced from the dawn of civilization in India, but the emphasis will be on the period since 1919. Particular attention will be paid to the life of Gandhi and the writings of Nehru. (Half course.)

704 - History 462. History of China

This course surveys the development of China since the dawn of civilization, with special emphasis on the period since 1890. Particular attention is paid to the invasion of China by the western powers, and to Chinese reaction to this development. (Half course.)

704 - History 471. Historians, Past and Present

Prerequisites: History 472. This course may be taken only with permission of the instructor. This course surveys the development of historical writing from ancient times to the present, with special emphasis on the various modern schools of historical philosophy and on the growth of criticism. (Full course.)

704 - History 472. Historiology

Prerequisite: At least 2 courses in History. This course may be taken only with the permission of the instructor. A course in the application of modern historical criticism to a specific problem to be chosen in consultation with the instructor. (Full course.)

704 - History 481. History of Africa

A survey of the early history of Africa followed by a more intensive study of the past century. Special emphasis is given to the changes in Africa resulting from contact with European civilization. (Full course.)

Major in History

Attention is called to the statement on majors on pages 89-96.

POLITICAL SCIENCE

Herbert Furlong Quinn, *Professor of Political Science,*
and Chairman of the Department.
Robert Alexander Fraser, *Lecturer in Political Science.*

705 - Political Science 211. Introduction to Political Science

A study of the origin and nature of the State, and the relation of the individual to it. The course will deal with the nature and interpretation of law, constitutions, division of powers of government, organization of political parties, formation of public opinion, the function of parliaments, the different types of cabinet systems, the problems of municipal government, associations of states, Nationalism. (Full course.)

705 - Political Science 221. Structure and Function of the United Nations

The purpose of this course is to provide the student with a working knowledge of the underlying philosophy and basic principles of the United Nations Organization as well as the nature and function of the various agencies of which it is composed. The student will become acquainted with the role of the General Assembly, the Security Council, Trusteeship Council, Economic and Social Council and other bodies set up for the purpose of fostering international peace and co-operation. (Half course.)

705 - Political Science 251. Government and Politics of Canada

A study of the British North America Act and its judicial interpretation; the nature of Canadian federalism; the parliamentary system; nature and organization of political parties; provincial and municipal governments; law and the courts; foreign policy. (Half course.)

705 - Political Science 291. Elements of Law

This course is designed to provide students with an elementary knowledge of those institutions and problems of law with which they may reasonably be expected as citizens to have some understanding and appreciation. As a background to this study the meaning of law and its various divisions will be treated with a view to relating the legal order to present day problems of society. Topics will include the organization and functioning of the Federal and Provincial court systems including the appointment and selection of the Judiciary; the various stages in a lawsuit; a brief consideration of the Quebec civil law as it affects questions of marriage and the more common contracts such as sale, lease and partnership. (Full course.)

705 - Political Science 411. Political Parties

Prerequisite: Political Science 211. A study of the history, ideology, organization and electoral geography of political parties in the United States, England, France, Germany, and some of the smaller countries in Western Europe. The course will also deal with the different types of party systems, the nature and function of parties in the democratic process, the nature of political elites, pressure groups, the organization of elections, and political propaganda. Lectures, discussions and term paper. (Full course.)

Textbook: Neumann, *Modern Political Parties.*

705 - Political Science 412. Governments of France and Germany

Prerequisite: Political Science 211 or History 213. This course emphasizes the legislative, executive, judicial, and party systems of the Fourth and Fifth Republics in France, and the Federal Republic of Western Germany. Some attention is given to governmental systems of these countries prior to World War II, and to the political institutions of Eastern Germany. (Half course.)

705 - Political Science 413. Government of Russia

Prerequisite: Political Science 211 or History 213. A study of the Russian system of government including legislative, executive, and judicial branches; the role of bureaucracy; the Communist Party. Comparisons with Western systems of government. (Half course.)

705 - Political Science 421. International Political Relations

Prerequisite: Political Science 211. This course will deal with the following topics: the rise of the Western state-system; nationalism and national sovereignty; imperialism and the balance of power; power politics in war and peace; internationalism and international organizations; international law and international government. Through lectures and class discussions the student will gain some knowledge of the complex pattern of international relations which will serve as a basis for evaluating current events in the modern world in which we live. (Full course.)

705 - Political Science 431.   Political Theories, Ancient and Modern

Prerequisite: Political Science 211 or Philosophy 211. A critical study and analysis of the great thinkers on the problems of politics; Plato, Aristotle, Machiavelli, Hobbes, Locke, Rousseau, Hegel, Marx, Mill, etc. This course is designed to give a survey of systematic political reasoning from the classical period up to the present time in an endeavour to show the foundations of modern political thought. (Full course.)
Textbook: Sabine, *History of Political Theory.*

705 - Political Science 441.   Problems of Public Administration

Prerequisite: Political Science 211. This course deals with the nature and function of the administrative branch of government. The student is introduced to such problems as the proper organization of government departments, the management of government corporations, budgeting, selection and training of personnel, maintenance of morale and discipline, relationship between legislature and administration, relationship between the administration and the public. (Half course.)

705 - Political Science 442.   Local Government and Administration

Prerequisites: Political Science 211 and preferably 441. This course is designed to provide a survey of the theory and practise of local government and administration. The student will be introduced to such topics as the organization and powers of units of local government, the administration of municipal services, problems of municipal finance, the government of metropolitan areas, and provincial-municipal relations. While principal emphasis will be placed on the development of local government in Canada, some time will be devoted to a consideration of British and American experience. (Half course.)

See also: Economics 441, Public Finance and Fiscal Policy.

Major in Political Science

Attention is called to the statement on majors on pages 89-96.

PSYCHOLOGY

James Winfred Bridges, *Professor of Psychology, and Chairman of the Department.*
Gerald Maurice Mahoney, *Associate Professor of Psychology.*
Joseph Philip Zweig, *Associate Professor of Psychology.*

For regularly enrolled undergraduates Psychology 211 is a second year subject Partial students may be admitted without prerequisite.

706 - Psychology 211.   A General Study of Mind and Behaviour

The purpose of this course is the development of an adequate understanding of human behaviour and experience. The work includes a study of the sense organs and nervous system, perception, learning, memory, motivation and the basic needs, emotional reactions, personality development, adjustment and integration, abnormal personality, mental abilities and aptitudes, and the application of psychological findings to the problems and activities of everyday life. This course is prerequisite to all other courses in psychology. (Full course.)

706 - Psychology 221.   Industrial Psychology

Prerequisite: Psychology 211. A specialized course in the application of psychological principles to business and industry. This course will be concerned with general principals of employee testing; the interview and related employment methods; training of industrial employees; work, fatigue, and efficiency. (Half course.)

706 - Psychology 223.   Educational Psychology

Prerequisite: Psychology 211. Consideration of psychological evidence bearing upon teaching, learning, and the role of education in personal development. (Half course.)

706 - Psychology 225.   Psychology and Crime

Prerequisite: Psychology 211. A specialized course in the application of psychology to problems of legal procedure, crime and punishment. The course includes the study of the psychology of the judge, the jury, the witness, the police and the criminal. Discussion of the social and psychological factors contributing to crime and delinquency, and consideration of the various penal methods also is included. (Half course.)

706 - Psychology 231.   Child Development

Prerequisite: Psychology 211. A survey of the growth and development of the child from infancy to maturity. The course will include discussion of physical, mental, and social age norms, the results of experimental, clinical, and psychometric investigations, and the application of scientific findings in the care and training of children. (Full course.)

706 - Psychology 412.   Advanced General Psychology

Prerequisite: Psychology 211. This course makes a more detailed study of general, physiological, and individual psychology. The work includes an outline of the history of psychology, the various schools of psychological thought and their historical background, psycho-analysis, and individual differences, normal and abnormal. (Full course.)

706 - Psychology 427.   Vocational Guidance

Prerequisite: Psychology 211. A course in the functions and methods of vocational and educational guidance and occupational information; study of the individual through interviews and aptitude tests; counselling regarding vocational and educational plans. Laboratory work involving detailed study of tests for measuring abilities, aptitudes, proficiency, interests, and personality traits, and their vocational significance. Lectures and laboratory. (Full course.)

706 - Psychology 441.   Social Psychology

Prerequisite: Psychology 211. A study of the individual in his socio-psychological environment, the cultural and hereditary determinants of behaviour, the uniformities and variations among human beings, sex and race differences as determined by cultural patterns, the social significance of language, social interaction, attitudes, stereotypes, propaganda, race prejudice, public opinion and morale, group dynamics and sociometry. (Half course.)

706 - Psychology 451.   Personality and Mental Hygiene

Prerequisite: Psychology 211. The course deals with the nature of personality, the correlation of mental characteristics with physcial traits, bodily form and expressive movements, the analysis of intellect, temperament and character, the integration and development of personality and its relation to the patterns of culture, theories of personality, the problem of types, adjustment and resolution of conflict, personality tests, rating scales and inventories. (Half course.)

706 - Psychology 461.   Pysiological Psychology

Prerequisite: Psychology 211. This course attempts to relate neurophysiology to such psychological problems as learning, attention, and emotion. The topics treated include excitation and conduction in the neuron; synaptic mechanisms; sensory and motor systems; the internal environment; the electrical activity of the brain. Emphasis is given to brain damage studies in animals and man, and the problem of localization of function in the nervous system. (Half course.)

706 - Psychology 462.   Comparative Psychology

Prerequisite: Psychology 461 (unless exemption is granted by the instructor.) The comparative method in the study of psychological problems, the evolution of behavior and its mechanism from protozoa to man, discussion of tropisms, reflexes, instincts, needs, sensory capacities, learning, thinking, feeling, and some apparently mysterious powers of animals and man.   (Half course.)

Major in Psychology

Attention is called to the statement on majors on pages 89-96.

SOCIOLOGY

Harold Herbert Potter, *Associate Professor of Sociology.*

Kurt Jonassohn, *Assistant Professor of Sociology.*

707 - Sociology 211.   Introductory Sociology

The social function of sentiment and custom is discussed. Studies of custom by social science experts are described. Research materials relating to Canada are introduced. Concepts of role, status, personality, and social structure are carefully examined. A special concern is that students should find it possible to relate what they learn in this course to intimate aspects of their own lives, and to the various types of group life with which they are acquainted.   (Full course.)

707 - Sociology 221.   Social Change

Prerequisite: Sociology 211. Theories of social change found in the works of leading nineteenth and twentieth century writers are examined. The facts of social change in different parts of the world, as presented in current research, are used to test the adequacy of theory. A survey is made of the remedial measures developed to correct conditions of individual and group maladjustment.   (Half course.)

Textbook: C. W. Mills, *White Collar.*

707 - Sociology 231.   General Anthropology

The evolution of man and his culture to the historical era; the differentiation of races and the problem of race superiority; general principles of cultural anthropology; the origin and development of social, economic and political institutions; marriage, the family, religion, art, science, and other problems of culture.   (Half course.)

707 - Sociology 232.   Anthropology—The American Indian

Prerequisite: Sociology 231. The principles of general anthropology applied in a survey course on the American Indians. The advent of man to America; early cultural developments and the differentiation of the various groups or tribes; the culture of the Mayas, Toltecs, Aztecs, Pueblos, Iroquois, Eskimos, Northwest coast tribes, Andean, and other early civilizations of North and South America; the cultural contributions of the Indian to the white man's civilization. (Half course.)

707 - Sociology 238.   The Social Origins of Law

The development of law through habit and custom. Discussion of the integrative role of law in relation to specific situations in certain "primitive" societies, especially with respect to blood-feud, bride-price, and the priest-king relationship and with respect to their related sanctions. Hebrew, Roman and English Medieval law are then dealt with, with special emphasis on the social movements which developed English law, from the Magna Carta to the British North America Act.   (Half course.)

Textbooks: *The Holy Bible.*
Franklin, *Man, Society and the Law.*

707 - Sociology 243.   Industrial Sociology

Prerequisite: Sociology 211. This course presents a sociological approach to the study of work in modern industrialized society. It deals with occupations and professions, some characteristics of the labour force and the labour market, and an analysis of social interaction and its effects in occupational groups and work groups.   (Full course.)

707 - Sociology 251.   The Social Origins of Canadian Law

Development of principles governing personal freedom and the rights of the individual in Canada, as seen by a sociological study of the judicial trial process and including the examination of legal principles, such as innocent until proven guilty and benefit of the doubt; sociological theories of crime causation, classification of criminals; role and function in society of the police, judge, lawyer and jury; penal and correctional procedures and institutions. (Half course.)

Textbooks: Barnes and Teeters, *New Horizons in Criminology—3rd ed.*
The Criminal Code of Canada (1955)—Carswell Edition.

707 - Sociology 411.   Techniques in Sociology

Prerequisite: Sociology 211. This course deals with the design of research, the methods of data collection, and the techniques of analysis. It includes a laboratory period during which a research project will be designed and carried out by the students. The emphasis will be on the training for the critical reading of published research materials, as well as on training for graduate study.   (Full course.)

Textbook: Selltiz, et.al., *Research Methods in Social Relations.*

707 - Sociology 422.   Social Movements and Institutions

Prerequisite: Sociology 211. The nature and functions of social movements in general are studied. Specific cases include political, racial, and religious movements. The second half of the course deals with the nature and functions of institutions and the character of bureaucracy.   (Full course.)

Textbook: E. McLung Lee, *New Outline of the Principles of Sociology.*

707 - Sociology 423.   Classics in Sociological Thought

Selected works of eminent authors are read, rather than read about. Critical discussion is essential. Students thus become familiar with some of the tested work of the best minds dealing with sociological problems. Students preferred are those with at least two previous credits in sociology.   (Full course.)

Textbook: E. Durkheim, *The Rules of Sociological Method.*

707 - Sociology 441.   The Modern Community

Prerequisite: Sociology 211. The physical and social characteristics of urban communities are studied with special attention paid to ecological patterns and ecological processes. Forms of adjustment, co-operation and control are included in these studies.   (Half course.)

Textbook: N. P. Gist and L. A. Halbert, *Urban Society.*

707 - Sociology 442.   The Family

Anthropological studies of family structure and family operations; stipulations in Quebec law; the relationship between family structure and functions, and social conditions in the larger community; problems normally to be expected in marriage and family life; studies of marital happiness; the possibility of sexual maladjustment. This course is designed to guide students who may go on to graduate study, as well as students whose main objective is preparation for marriage.   (Half course.)

707 - Sociology 443.   Intergroup Relations

Prerequisite: Sociology 211. Concepts of race, ethnicity, racial prejudice, are examined. Types of group involved in intergroup problems are noted, and the notion of the marginal man is dealt with fully. The selective nature of migration and differences in the thought processes of different types of group are described. Studies of specific intergroup situations include African and South Pacific regions, as well as Germany, the United Kingdom, the Americas.   (Half course.)

Textbook: B. Berry, *Race and Ethnic Relations*.

707 - Sociology 461.   Demography

Prerequisite: Sociology 211. This course consists of a brief survey of population theory and an introduction to the techniques of population analysis. It will cover the size, distribution, and composition of the population; changes in these characteristics; and the relationship between population trends and social and economic conditions, with special reference to recent trends.   (Half course.)

Textbooks: G. W. Barclay, *Techniques of Population Analysis*.
United Nations, *The Determinants and Consequences of Population Trends*.

Major in Sociology

Attention is called to the statement on majors on pages 89-96.

APPLIED SOCIAL SCIENCE

A. Douglas Insleay, *Lecturer in Applied Social Science*.
R. C. Rae, *Lecturer in Applied Social Science*.
J. Alexander Sproule, *Lecturer in Applied Social Science*.

Because of their practical nature and the limited amount of sociological theory and content, the courses listed under this heading are not offered as preparation for graduate study in sociology.

708 - Applied Social Science 211.   History, Philosophy, and Organization of the Young Men's Christian Association

The origin and development of the YMCA organization on national, international and world-wide scales; institutional patterns and methods of work; the significance of purpose and aims; Christian emphasis in the YMCA. (Half course.)

708 - Applied Social Science 221.   Administration of YMCA and Similar Agencies

The development of the administrative process and the principles and methods of administration and organization in the YMCA and similar agencies; specific areas of administration analysed including personnel, financing, maintenance, public relations, personal efficiency and adequate recording processes. (Half course.)

708 - Applied Social Science 231.   Program Materials and Methods

A course involving some of the specific physical education methods, principles and skills required for leadership in the YMCA and similar social agencies. The course includes lectures and gym sessions and covers principles, program planning, tournaments, games and skills, visual aids, etc.   (Half course.)

708 - Applied Social Science 431.   Group Development and Supervision of Program Leaders

Orientation to group development, group processes, and group guidance. Analysis of group functioning and of member roles. Development of skill in group guidance in settings including boards, committees, program groups, classes, teams, and special interest groups. Opportunity for practice and evaluation of leadership skills in small groups during class sessions. Recruitment, in-service training, supervision and systematic evaluation of program leaders. First year students may not register for this course.   (Full course.)

708 - Applied Social Science 441.   Community Leadership

Prerequisite: Sociology 211. The role of YMCA Secretaries and staff members of similar organizations in working within a community; relationships between voluntary and public social agencies within the community; assessing the community and defining its needs.   (Half course.)

708 - Applied Social Science 451.   Principles and Practies of Guidance

Prerequisite: Psychology 211 or Sociology 211. Principles and methods of counselling and guidance with particular reference to their application in the setting of the YMCA and similar social agencies. Organization and administration of a guidance service including measurement and appraisal, techniques of counselling, occupational and educational information, and referral, will be considered.   (Half course.)

708 - Applied Social Science 461.   Social Welfare

A general course concerned with social welfare problems in modern society. Some analysis of these problems in relation to economic trends and cultural patterns. A description of the public and private agencies that have been established to provide social welfare services to meet the needs that arise in society. Course open to 3rd or 4th year students only or by permission of Dr. H. F. Hall. (Half course.)

708 - Applied Social Science 462.   The Social Welfare Services

Prerequisite: Applied Sociology 461. A description of the functional settings in which social welfare services are practised. A consideration of the different divisions of social work services, i.e., case work, group work, community organization, administration and research. The use of case materials to illustrate the type of problems dealt with in these divisions. Some consideration of the connective links between social welfare services and religion, law, medicine, nursing, teaching and other callings. Course open to 3rd and 4th year students or by permission of Dr. H. F. Hall.   (Half course.)

Commerce Division

COMMERCE DIVISION

Philip T. R. Pugsley, *Senior Professor in the Commerce Division.*

ACCOUNTANCY

James Gilchrist Finnie, *Professor of Accountancy.*

800 - Accountancy 211.   Accounting (Introductory)

This introductory course in accounting presents the fundamental principles and emphasizes the application of those principles through modern procedure. It includes: recording of debits and credits and the application of the theory of double-entry in ledger accounts with assets, liabilities, owners' equity, income and expense accounts; journalizing, posting, use of special books of original entry, columnar journals, voucher register, notes registers, and controlling accounts; accounting for servicing, trading, and manufacturing establishments; posting to general and subsidiary ledgers; preparation of working papers, adjusting and closing entries; locating errors; preparation and classification of manufacturing, trading and profit and loss statements, surplus statement, and balance sheet; forms of organization and accounting procedure for proprietorship, partnership and limited company; reconciliation of bank accounts; and departmental operations. (Full course with practice.)

    Textbook: Finney & Miller, 5th Ed. (Can.Ed.), *Priciples of Accounting (Introductory).*

800 - Accountancy 411.   Accounting (Intermediate)

Prerequisite: Accountancy 211. This course is designed to provide increased facility in the application of accounting principles to the more complex phases of commercial activity, with emphasis on analytic methods and interpretative processes, and relates particularly to the procedure of accounting for manufacturing establishments. It includes: single-entry, capital reconciliation and conversion to double-entry; partnership organization, admissions, retirements, dissolution and conversion to limited company; limited-company organization, capital structure; bonds, sinking funds and reserves; methods of depreciation and disposal of fixed assets; preparation, analysis, and interpretation of financial statements; source and application of funds; introduction to price-level impact on financial statements. Application of the Dominion and Provincial Companies Acts in relation to the procedure of accounting, and in the preparation of financial statements is also covered. (Full course with practice.)

    Textbook: Finney & Miller, 5th Ed. (Can.Ed.), *Principles of Accounting (Intermediate).*

800 - Accountancy 412.   Accounting (Advanced)

Prerequisite: Accountancy 411. This is an advanced course in the principles of partnership formation, valuation, dissolution and liquidation; joint venture, consignments, installment sales, and insurance; bankruptcy, trusteeship, receivership and estates; preparation of statement of affairs, realization and liquidation reports; agency and branch accounting; parent and subsidiary accounting, including consolidations; foreign exchange; public accounts dealing with governments and institutions, indicating the sources and classification of fund accounts; general fund, revenue fund, stores fund, bond fund, sinking fund, trust fund, special assessment fund. It is strongly recommended that students avoid taking this course concurrently with Accountancy 421 or 422. (Full course with practice.)

    Textbook: Finney & Miller, 5th Ed., *Principles of Accounting (Advanced).*

800 - Accountancy 421.   Cost Accounting (Introductory)

Prerequisite: Accountancy 411. This course provides a knowledge of the fundamentals of cost accounting; the essential records; and methods of arriving at cost, including the following: purposes of cost accounting; elements of cost; process cost systems; job cost systems; controlling accounts and the cost records; accounting for materials; material storage and consumption; perpetual inventories and stores control; valuation of materials; accounting for labour cost; wage systems; accounting for manufacturing expense; distribution of manufacturing expense to production; the cost to make and sell; sundry forms; monthly closing entries; preparation of operation and financial statements; and cost reports. A brief introduction to estimating and standard cost systems is also provided; both of which are more thoroughly handled in Accountancy 422. This course is operated in co-operation with the Society of Industrial and Cost Accountants of Quebec. It is strongly recommended that students avoid taking this course concurrently with Accountancy 412. (Half course with practice period continuing throughout the year.)

800 - Accountancy 422.   Cost Accounting (Advanced)

Prerequisite: Accountancy 421. This course provides advanced and detailed knowledge of cost problems, records and practices, and cost accounting in relation to inventories, standard costs, budgetary control, and other devices of the various departments of a business, including the following: estimating cost systems; principles of standard costs, current and basic standards, variances, cost ratios, budgetary control; variable budgets; differential cost analyses; defective and spoiled work; by-products; idle and non-productive time; weighted averages; interest on investment; uniform cost methods; distribution and marketing costs; machine accounting; statistical and graphical cost reports; current cost accounting developments; statements; actual working out a practice job cost system. This course is operated in co-operation with The Society of Industrial and Cost Accountants of Quebec. (Half course with practice period, continuing throughout the year.)

800 - Accountancy 431.   Auditing and Investigation

Prerequisite: Accountancy 411. This course on the principles underlying the practice of auditing, includes the purposes and advantages of an audit, types of audits and examinations, qualifications of an auditor, preparatory considerations, the use of working papers and audit programmes, systems of internal check, the audit of asset, liability, revenue and expense accounts and of business transactions generally, forms of fraud and its detection, the legal duties and responsibilities of auditors, and auditors' reports and certificates: investigation types, procedures and reports. (Full course.)

800 - Accountancy 441.   Internal Auditing

Prerequisite: Accountancy 211. Mature partial students with prior experience in this field may be admitted without prerequisite. This course is designed to cover the basic principles of internal auditing, a management control, and the practical application of these principles in safeguarding the assets of an enterprise. It includes a discussion of the organization and operation of an Internal Audit Department, the planning of audit programmes, the techniques, working papers and reports. Other topics discussed will include the Internal Control and Internal Audit of —purchasing and material control; inventory control; sales; receivables; payrolls; payables; accrued and other liabilities; cash receipts and disbursements; fixed and other assets; scrap and by-products; income and expenses; manufacturing costs; ownership equities; branch operations; subsidiary companies; investments; and other regular and special activities. Lectures will be delivered by a group of specialists following a programme developed in co-operation with the Montreal Chapter of the Institute of Internal Auditors. (Half course.)

800 - Accountancy 451.   Machine Accounting and Other Machine Applications.

It is desirable to take Administration 221 before attempting this course. This course is an introduction to the use of automatic and semi-automatic business machines in ledger keeping, billing, payroll, costing, process control, inventory records, report preparation, sales statistics and other applications. Emphasis is placed on the principles of integrated data processing through the use of punched cards, punched tape and magnetic tape. Several of the lectures will be delivered by specialists on specific types of machines. This course is operated in co-operation with the Montreal Chapter of the National Machine Accountants Association. (Half course.)

Major in Accountancy

Attention is called to the statement on majors on pages 89-96.

COMMERCE

George Robert Curnew, *Assistant Professor of Commerce.*
Adam Dickie, *Assistant Professor of Commerce.*
Zoltan G. Popp, *Assistant Professor of Commerce.*
Donald William Burke, *Lecturer in Commerce.*
Martin Henry Franklin, *Lecturer in Commerce.*
Harvey Mann, *Lecturer in Commerce.*

ADMINISTRATION

801 - Administration 211.   Business Organization and Industrial Management

Prerequisite: Accountancy 211. This course in organization and management is designed to serve as an introduction to the various phases of business and industry and to provide some vocational orientation in the field of commerce. Topics include origin, growth, and classification of business organizations, types of securities, costing, marketing, advertising, plant location, production control, purchasing, wage systems and labour relations, transportation, managerial interpretation and use of financial statements and statistics, government regulations affecting business. (Full course.)

801 - Administration 221.   Office Management

A course in the principles of office management, including such topics as the function of the office in business; organization and principles of control; office systems and routines; office equipment and labour-saving devices; office planning and layouts; selection and training of office personnel; office communications. It is strongly recommended that Administration 211 be taken before attempting this course. This course is offered in co-operation with the National Office Management Association Montreal Chapter Inc. (Half course.)

801 - Administration 251.   Production Management

This course is to acquaint the student with the means used by management to control the output of a productive unit; and covers tools of production, including reading of blue prints and use of machine tools; time study and standards; methods study and improvement; wage administration, including job and worker rating and incentive systems; control of manufacturing operations and organization relationships, including production controls of planning, routing and scheduling, waste controls, inspection and quality controls, and standards of procedure and cost controls. It is strongly recommended that Administration 211 be taken before attempting this course. (Half course.)

801 - Administration 431.   Personnel Administration

This is a survey course of personnel administration for those presently fulfilling personnel or supervisory responsibilities, and for senior students wishing to obtain a survey of the personnel field.

This course introduces the student to the various phases of the work and deals with such fundamentals as the organization and administration of a personnel department. It also covers personnel forms and records; presentation of statistical data; recruiting, selection, placement; job training; merit rating; job evaluation; wage structure; and force losses. It touches on the industrial relations aspect, and provides an appreciation of the various types of surveys including: morale; employee opinion; and wage surveys. This course is offered in co-operation with the Montreal Personnel Association. (Full course.)

801 - Administration 441.   Human Relations in Business

Prerequisite: Psychology 211 or Administration 431. This course is primarily for people who have had supervisory experience. It considers the social structure of an organization and the group dynamics of employee behaviour. It deals with the fundamentals of behaviour, motivation, frustration, attitude, and morale, and their effect on employee efficiency. Role-playing and case-study methods will be used. (Half course.)

801 - Administration 442.   Purchasing (Introductory)

Prerequisite: Administration 211. Mature partial students with prior experience in this field, may be admitted without prerequisite. This course is designed to cover the fundamentals of purchasing policies and procedures and the organization and functions of the purchasing department in business and industry. It is of particular interest to individuals not now working in purchasing departments, but who are interested in acquiring knowledge of the subject; and is also for employees of a purchasing department who wish to obtain a well-rounded knowledge of purchasing principles. This course is offered in co-operation with the Purchasing Agents Association of Montreal. (Half course.)

801 - Administration 443.   Purchasing (Advanced)

Prerequisite: Administration 442. This course is for students who expect to be, or are engaged in the purchasing department of an enterprise. It deals more intensively with the topics covered in Purchasing 442, and is designed to serve as an opportunity for study and discussion by men who have experience in the field of purchasing. Class discussion and case studies are the basic method of study employed. This course is offered in co-operation with the Purchasing Agents Association of Montreal. (Half course.)

COMMERCIAL LAW

802 - Commercial Law 211.   Commercial Law

This course provides a general survey of the law obtaining in the Province of Quebec with special emphasis on the aspects thereof relating to business and commerce. It includes a basic outline of the law of Domicile, Marriage, Persons, Property, Ownership and its modifications Successions, Gifts and Wills, Testamentary Executors, Trusts, Contracts, Quasi-Contracts, Offences and Quasi-Offences, Privileges, Hypothecs and Prescription, and a more detailed study of the Contracts of Sale, Lease and Hire of Things and of Work, Mandate, Loan, Deposit, Partnership, Suretyship, Pledge, Insurance, and an outline of the basic law applying to Negotiable Instruments, Joint Stock Companies, Bankruptcy and Winding Up, and Copyrights, Patents, and Trade Marks. It is strongly recommended that Accountancy 211 be taken before attempting this course. Taxation is covered in a separate course under Commercial Law 441. (Full course.)

802 - Commercial Law 221.   Industrial Legislation

This course is a study of legislation affecting labour and employment and of the industrial and social conditions to which such legislation applies, including: labour contracts; conditions and hours of work; wages; social and industrial legislation, including a review of international industrial law and the work of the International Labour Organization; collective bargaining; minimum wage legislation; labour agreements; unemployment insurance; old age insurance; health insurance; the protection of Canadian labour against low standard immigration by the immigration and alien labour acts; workmen's compensation and unemployment insurance; labour organizations and trade unionism; the right to strike; picketing and other labour activities; employer-employee relations and labour disputes; female and child labour and their employment in dangerous industries; illegal combinations; patents, trade-names, copyrights; unfair competition. This course is operated in co-operation with The Society of Industrial and Cost Accountants of Quebec. Those desiring a more general course in law should take Commercial Law 211. Those wishing more general courses in labour relations should take Industrial Relations 411 and 412. (Full course.)

802 - Commercial Law 431.   Company Secretarial Practice

Prerequisites: Accountancy 211, Commercial Law 211. This course covers duties of the secretary of a limited company, including his statutory duties under the companies' acts, books and records to be kept, business problems to be faced, issuance of shares, and payment of dividends, preparation of governmental reports, and meetings of directors and shareholders. This course is offered in co-operation with the Chartered Institute of Secretaries (Quebec Branch). (Half course.)

802 - Commercial Law 441.   Taxation

Prerequisite: Accountancy 211. This course is devised to give authentic and up-to-date information on one of the major factors in business today. Discussion of problems is encouraged. Topics covered include corporation and personal income taxes and a survey of sales taxes, estate taxes and succession duties, and other levies. (Half course.)

COMMUNICATION

803 - Communication 211.   Commercial Correspondence

Prerequisite: English 211. Advanced instruction is given in commercial correspondence. Actual practice and constructive criticism are included. Types of letters covered include applications for position, inquiries and orders, adjustments and complaints, collections, and sales. Students are coached in the techniques of dictation, and required to turn in assignments weekly. (Half course.)

EXECUTIVE TRAINING

804 - Executive Training 211.   Supervisory Training

The course deals with three supervisory skills: 1. Skill in Instructing, essential to convey knowledge possessed, and to delegate work; 2. Skill in Planning and Improving Methods, vital if satisfactory results are to be achieved by both the supervisor and those he guides; and 3. Skill in Leading and Working with People to maintain the co-operation and teamwork of staff. The course is based upon an adaptation of the United States Training-Within-Industry program which covers Job Instruction Training, Job Methods Training and Job Relations Training, sometimes referred to as the "J" series. Sessions are limited to a group of twelve persons. (Half course.)

804 - Executive Training 421.   Analysis of Business Conditions

This is a course in the study and interpretation of current business conditions from the point of view of the man in business. The various measures available are thoroughly discussed as well as their sources and interpretation. Undergraduates in commerce will be admitted to this course if they have completed Administration 211 or its equivalent. It is desirable that this course be taken prior to Executive Training 422. (Half course.)

804 - Executive Training 422.   Business Planning and Budgeting

This course deals with the planning aspect of business administration and indicates how business operations may be planned through the use of a budgeting system. Various measures which may be used to assist in planning and controlling business operations are discussed, including cost-volume-profit analysis, break-even points, etc. Undergraduates in Commerce will be admitted to this course if they have completed Administration 211 or its equivalent. It is desirable that this course be taken after Executive Training 421. (Half course.)

804 - Executive Training 431.   Administration

Prerequisite: Administration 211. This is an advanced seminar course for business executives who wish to bring themselves up to date on the latest developments in the field of administration. In order to qualify for membership in this group candidates must establish that they are members of a recognized professional body, active in the management field, or that they are holders of a recognized commerce degree. Final year undergraduates in Commerce will be admitted. Guest specialists are invited to outline the current position in their specialized field and a thorough discussion of the subject covered then takes place. In order to encourage maximum group participation the number of registrants is limited to about thirty. This course is operated in co-operation with the Institute of Administration. (Half course.)

804 - Executive Training 441.   Developing Effective Systems and Procedures

This course is an introduction to the techniques used by systems analysts to develop more effective systems and procedures. Topics covered include: techniques of fact gathering, systems department organization, work simplification, work measurement, flow charting, forms design and control, records management, reproduction and printing processes, systems installation, procedure manual writing. This course is operated in co-operation with The Montreal Chapter, Systems and Procedures Association of America. It is strongly recommended that Administration 211 be taken before attempting this course. (Half course.)

804 - Executive Training 442.   Integrated Data Processing

Prerequisite: Executive Training 441. This course is an introduction to integrated data processing using case histories of Canadian companies which have emphasized its use as an instrument of management. The principles, equipment and forms in systems from manual to electronic will be examined. This course is operated in co-operation with The Montreal Chapter, Systems and Procedures Association of America. (Half course.)

FINANCE

805 - Finance 221.   Commercial Algebra

This course is designed to provide an adequate algebraic background for the commerce student and the necessary training prerequisite to Finance 231. It includes a review of the elementary algebraic operations of addition, subtraction, multiplication, division, fractions, simple equations, and percentages. It also covers logarithms, ratio, proportion, arithmetic and geometric progressions, theory of quadratics, the binominal theorem, and graphical algebra. Students contemplating advanced studies in the field of mathematics or commerce should take Mathematics 211 and 221 in preference to this course. Students who have not completed high school algebra or who require a refresher course should consider taking Mathematics 201 before this course. NOTE: Credit for this course will not be given in addition to credit for Mathematics 221 or 222. (Half course.)

805 - Finance 231.   Mathematics of Finance

Prerequisites: Mathematics 221, Finance 221, Algebra 55, or Intermediate High School Algebra. This course is an introduction to the theory of interest. It is designed to acquaint the student with those commercial problems involving simple interest; compound interest, annuities (ordinary, deferred, perpetuities and due) amortization and sinking funds, depreciation and bond values. (Half course.)

805 - Finance 251.   Credits

This is a practical course covering the subject of credits and designed to help students of the Canadian Credit Institute, and those working in the field of credit, particularly at the wholesale and retail levels. It covers duties and qualifications of a credit man; credit and its place in the business structure; credit instruments; sources of credit information; analysis of the credit risk; credit records; and types of credit. Visits will be made to Credit Departments and agencies. (Half course.)

805 - Finance 252.   Collections

This is a practical course covering the subject of collections and designed to help students of the Canadian Credit Institute, and those working in the field of credit, particularly at the wholesale and retail levels. It covers collection follow-up systems; bad debt analysis; credit frauds; locating debtors; collection policies, and laws affecting collections including guarantee and suretyship, sale of goods interest, limitations of actions with prescription, bankruptcy and insolvency, conditional sales agreements, and repossessions. Visits will be made to Credit Departments and agencies. (Half course.)

805 - Finance 411.   Corporation Finance (Introductory)

Prerequisite: Accountancy 211. This is a practical course dealing with the financial management of corporations. A Study is made of various classes of stocks and bonds, of stock warrants and rights, of dividend and interest payments, of capital structures and security underwriting. Actual examples taken from Canadian corporation history are used to illustrate various points and well-known financial reference services available in Canada are used in connection with this course. This course is offered in co-operation with the Investment Dealers Association of Canada. (Half course.)

805 - Finance 412.   Corporation Finance (Advanced)

Prerequisite: Finance 411. This course is for those who expect to be engaged in finance or in the financial department of a corporation. Students are required to prepare case studies of selected Canadian corporations. Particular attention is paid to the raising of new capital, long term financial planning, working capital control, recapitalizing, refinancing and special problems such as bond interest default, arrears of dividends and forced reorganizations. This course is offered in co-operation with the Investment Dealers Association of Canada. (Half course.)

805 - Finance 421.   Investment Analysis (Introductory)

Prerequisite: Accountancy 211. This course covers the theory of investment from the standpoint of objectives of the investor, including such subjects as:— the background of investments; relating the use of investment funds to the capital development of the country; source of investment funds; evaluation of sources of financial information available to investors; study of media of investment; method of analysing corporation earnings statements and balance sheets; study of such investment factors as leverage, diversification, balanced portfolios; and the analyses of risks and returns on investments. This course is operated in co-operation with The Investment Dealers Association of Canada. (Half course)

805 - Finance 422.   Investment Analysis (Advanced)

Prerequisite: Finance 421. This course is designed to deal in more detail with a number of the subjects considered briefly in Finance 421. Students will be required to set up a sample investment portfolio, and to complete analyses of specific securities. Investment management and the use of various investment formulae will be discussed. The course is designed more as a working course than a lecture course, and practical investment problems will be used. This course is offered in co-operation with The Investment Dealers Association of Canada. (Half course.)

INDUSTRIAL RELATIONS

806 - Industrial Relations 411.   Labour Relations (Introductory)

This is a descriptive course dealing with the main elements in labour relations including company policy and practices, terms of employment, labour legislation, trade unions, and collective agreements. This course is offered in co-operation with the Montreal Personnel Association. (Half course.)

806 - Industrial Relations 412.   Labour Relations (Advanced)

This is an analytical course dealing with some of the more important labour relations activities in a company including the development of policy and practice manuals, preparation for collective bargaining, negotiation of agreements, handling of grievances, arbitration, application of labour legislation, and the operation of employee-management committee meetings. No student shall be registered for this course unless: (a) he has previously taken Industrial Relations 411 or the equivalent; or (b) has had a sufficient amount of practical experience in the field of labour relations as to be considered the equivalent to both the practical and theoretical part of Industrial Relations 411. This course is offered in co-operation with the Montreal Personnel Association. (Half course.)

806 - Industrial Relations 421.   Job Analysis and Evaluation

This course deals with the practical aspects of introducing and operating a Job Analysis and Evaluation system for a representative enterprise. The course is planned to help students prepare a programme suited to the needs of their own firms. (Half course.)

INSURANCE

807 - Insurance 211.   Insurance

After a brief review of the history of insurance this course deals with various types of insurance organizations; the construction, use and characteristics of mortality tables; the calculation of premiums; the principles of reserves, dividends and investments; policy provisions and benefits; plans of insurance and legal aspects of insurance in Canada. The treatment is mainly descriptive and general problems of insurance are discussed. While the emphasis is on life insurance, other types of risk and risk-bearing are dealt with briefly. The treatment is both descriptive and mathematical. Insurance 212 is recommended as a sequel or companion to this course. (Half course.)

807 - Insurance 212.   Insurance Needs and Planning

This course gives an outline of the various hazards confronting individuals sole proprietors, partnerships, and corporations, and an understanding of the means and methods of eliminating their economic consequences through the use of the medium of insurance. Types of insurance discussed include fire, marine, inland marine, liability, burglary and robbery, automobile, and disability. Life insurance for individuals and businessmen, surveys, and estate analysis are also covered. (Half course.)

MARKETING

808 - Marketing 211.   Marketing (Introductory)

This course is a general survey of marketing, or the distribution of goods from the factory to the ultimate consumer. Marketing functions, institutions, methods and policies are studied from the viewpoint of the business man. Stress is placed on the management problems faced in the distribution field. Topics covered include retailing, wholesaling, merchandising, pricing, selling, sales promotion, marketing research, distribution costs, and general review of legislation affecting marketing. This course is offered in co-operation with Advertising and Sales Executives Club of Montreal. (Half course.) (See Marketing 411 for an advanced course.)

808 - Marketing 221.   Advertising (Introductory)

This course explains the basic principles involved in creating advertisements and in carrying on complete advertising campaigns. Stress is placed upon the actual writing of copy and designing of layouts for various advertising media, an understanding of the processes of photo-engraving, the appreciation of advertising art, and a basic knowledge of advertising agency practice. See also Marketing 222. This course is offered in co-operation with the Advertising and Sales Executives Club of Montreal. (Half course.)

808 - Marketing 222.   Advertising (Advanced)

Prerequisite: Marketing 221. Mature Partial students who have an equivalent working knowledge of the theory and practice of advertising, may be admitted without prerequisite. Topics treated include an advanced study of the construction and styles of advertising copy; direct mail advertising; direct mail copy; format, lay-out and printing of mailing pieces; organization and execution of direct mail campaigns; house organs. This course is offered in co-operation with Advertising and Sales Executives Club of Montreal. Lectures, discussion, assignments, and criticism by the instructor. (Half course.)

808 - Marketing 241.   International Trade

The course deals with the fundamental and practical aspects of importing and exporting, covering such subjects as trade terms and definitions, import and export regulations; export credits insurance; customs regulations; handling of export traffic; trading documents; aircargo and air express; marine insurance; financing. Lectures will be delivered by a variety of specialists following a programme developed in co-operation with the International Trade Section of The Montreal Board of Trade. (Half course.)

808 - Marketing 251.   Transportation and Traffic (Introductory)

This course in freight traffic management is primarily for students who wish to specialize in this line of endeavour. It covers the practical aspects of transportation in Canada including such matters as bills of lading and shipping procedures; special services of railways; express; claims and claims prevention; and freight classifications. This course is planned in co-operation with the Quebec Division of the Canadian Industrial Traffic League. (Full course.)

808 - Marketing 252.   Transportation and Traffic (Advanced)

Prerequisite: Marketing 251. This course in freight traffic management is primarily for students who wish to specialize in this line of endeavour. It covers the practical aspects of transportation in Canada including such matters as tariff construction and freight rate structures; condition of carriage; ocean freight contracts; marine insurance; customs; interpretation of the railway act and railway law. This course is planned in co-operation with the Quebec Division of the Canadian Industrial Traffic League. (Full course.)

808 - Marketing 411.   Marketing Policies

Prerequisite: Marketing 211. Mature students who have a working knowledge of marketing methods and practices may be admitted without prerequisite. It deals more intensively with the topics covered in Marketing 211, and emphasizes the formulation and appraisal of marketing policies in the areas of product planning, distribution channel selection, pricing and sales stimulation. Budgeting for marketing and development of integrated marketing programs is also stressed. Class discussion and analysis of marketing case histories are the basic methods of study employed. This course is operated in co-operation with the Advertising and Sales Executives Club of Montreal. (Half course.)

808 - Marketing 412.   Marketing Research

Prerequisites: Marketing 211 and Marketing 411. Mature students who have a working knowledge of marketing methods and practices may be admitted without prerequisite. This course is primarily designed to acquaint the student with the many applications of modern marketing research to merchandising, sales, advertising, pricing, and promotion problems. Marketing research procedures and techniques are reviewed and special emphasis is given to the problem of sampling. Continuing research services offered by Canadian commercial research firms will also be reviewed. Actual research reports will be the subject of class discussion. This course is operated in co-operated with the Advertising and Sales Executives Club of Montreal. (Half course.)

808 - Marketing 413.   Retailing

Prerequisite: Marketing 211. Mature students who have a working knowledge of marketing methods and practices may be admitted without prerequisite. Of an introductory nature, the course is designed to develop in future marketing executives an appreciation of modern retailing practices and problems. The scope, importance, and characteristics of retailing in Canada, the fields of merchandise selection, inventory control, pricing, and retail promotion are given consideration. This course is operated in co-operation with the Advertising and Sales Executives Club of Montreal. (Half course.)

808 - Marketing 414.   Sales Management

Prerequisite: Marketing 211.   Mature students who have a working knowledge of marketing methods and practices may be admitted without prerequisite. Topics covered include the selection of salesmen, sales training, sales compensation, incentive and quota programs, organisation of sales territories, setting of sales quotas, expense control. The case method is employed to illustrate the topics under discussion. This course is offered in co-operation with the Advertising and Sales Executives Club of Montreal. (Half course.)

COMMERCIAL MATHEMATICS

Commercial Mathematics 221.   Commercial Algebra—See Finance 221.

Commercial Mathematics 231.   Mathematics of Finance—See Finance 231.

Mathematics 241.   Statistical and Graphical Methods—Listed in the Natural Science Division.

Majors in Commerce

Attention is called to the statement on majors in Accountancy, Business Administration, and General Administration on pages 89-96.

INDEX

Announcements of Sir George Williams University and the Sir George Williams Schools which may be obtained from the Registrar.

Sir George Williams University (Faculties of Arts, Science, and Commerce), day and evening divisions.

Sir George Williams High School, evening division only.

Sir George Williams Elementary School, evening division only.

Sir George Williams Business School, day and evening divisions.

Sir George Williams School of Art, day and evening divisions.

Sir George Williams School of Retailing, day division only.

The Summer Term at Sir George Williams.

The Training of Y.M.C.A. Secretaries.